THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

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THE EMPLOYMENT OF ARCHITECTS

EVERY citizen has realised that architects and builders will have a major part to play in the task of post-war reconstruction. Many, though fewer, realise also that they are already needed in the task in hand, and that part of that task is to get ready for work when the war is over—preparations which mean immediate work and planning while the war is still proceeding. But probably few outside the profession realise what very scant recognition has hitherto been given to architects.

In the past, the general attitude towards the architect has been to employ him if the job demands it, but to avoid him wherever it is possible to build without him. His job—planning—has been confused with the drawing of diagrams on paper sufficient to obtain the consent of authorities to a building project. His ability has been confused with the facility for using a drawing pen neatly and a superficial knowledge of by-laws. The fact that architectural skill can be acquired only after long and thorough training has never been properly recognised, nor has it been generally realised that, whereas the number of those who can plot some sort of a house with the intercepting trap in the right place is legion, the number of those who can produce a fine house is relatively very small. It will not need long in the post-war building boom to discover how few.

Several important points arise naturally out of these reflections. The first, and perhaps the most pressing, is the need for reservation. The reservation of architects at the age of 35, which has just been conceded, is a step in the right direction, but no more. The reason for withholding a seemingly obvious measure of social prudence is beyond comprehension. No pressing call upon combatant man power would appear to account for the mystery. There seems to be an almost complete disregard for the needs of the future. It takes a long time to train an architect, and we shall not be able to wave a wand over the returning troops and produce at will a multitude of planners. If they are not already standing by, we shall have to wait until they are ready, and those who are ready will be faced with more than they can possibly carry out with maximum efficiency.

Reservation is not, therefore, a matter which concerns the middle-aged architect, but is more especially a problem of youth. We should not only be holding on to our young trained assistants, but to the still younger ones who have had their call to architecture, and who have yet to be trained, or are as yet only partially trained. That would be the ideal policy if it did not conflict with any other national interest. We are prepared to admit that such a scheme, if applied in its widest sense, might open the door to abuses and jealousies, apart from its incidence upon the needs of the Fighting Forces; but we must lay stress upon the fact that there is a real need for such a course of action, and that the need has not yet received a tenth part of its rightful recognition. Some serious consideration must be given to the problem of how we are to secure proper administration of the great building programme that will immediately follow the war. In particular, we must see to it that some at least of the young men who would otherwise enter the armed forces are kept back to prepare for the important part they will have to play when that time comes.

Apart from this broader issue, there are the narrower ones affecting architects already at work. Two things have militated against their effective use. The first is the matter of payment for their services, and it is an important if mundane one. Nobody in the profession wishes to make profit out of the war, but it must be remembered that the architect is a skilled artist, and that his training is as long and expensive as that of a doctor or a solicitor. Following such a training he naturally assumes certain establishment commitments and a certain standard of living, which are impossible to drop just when he chooses. Accordingly, what would seem to be a handsome remuneration for a minor official would mean gradual but certain ruin for him to accept.

It is a well-known fact that qualified architects are being offered wages which are less than the earnings of many operatives in the building trade, who are enjoying increased rates and overtime. In addition, these architects are expected to be ready to "pull up their stakes" and proceed to any district, however far from their homes. Not many months ago the profession was circularised with a list of appointments open, the upper wage limit on which was £5 per week, which, as the circular admitted, was less than the standing of the men appealed to warranted. Even now it is faced with a great rebuilding problem authority entirely fails to appreciate the status of the key men who are required to put it into effect.

We would urge most strongly that now, and not when it is too late, some attempt should be made to find out what are our resources in architectural man power, what resources will be needed, and how best we may provide them. In this, some form of reservation will certainly have to be applied to the profession, even against the will of the loyal young men who are keen to play a combative part. In addition, it will have to be understood that because the good architect is a valuable member of society his services cannot be cheap, and that he will have to be offered the material inducements necessary, not to bribe him to serve his country but to make it practically possible for him to do so.

In this, also, there must be some common sense applied to the way architects are asked to apply their services to the present war effort, and geographical facts must be given some attention. So far there has been far too much call for movement of men—from the Midlands to the North or the South, and from there to the Midlands—a lack of organisation that deprives a large number of men of their full working capacity.

NOTES AND NEWS

St. Paul's Bombed Again.

Serious damage was done to St. Paul's in the indiscriminate attack on London last Wednesday night, and the Cathedral has been closed to visitors for the present. A large bomb pierced the roof of the north transept and exploded within the Cathedral, bringing down masses of heavy debris, the weight of which caused the floor of the building to collapse into the crypt.

After penetrating the roof the bomb severed some timber and caused the saucer dome to fall, with considerable quantities of stonework, on to the portico bearing the Wren inscription "*Si monumentum requiris, circumspice.*" There is now a large hole in the transept floor and a large pile of debris in the crypt beneath, which has been used as a practice room for the choir, and more recently as a centre for A.R.P. personnel. No important monuments were seriously damaged, but all the stained glass windows have gone.

Other Buildings Damaged.

The following places were also damaged in recent raids on London: The City Temple, Chelsea Old Church, St. Andrew's, Holborn, Guy's Hospital, Chelsea Royal Hospital, Maples, Christie's, and Selfridges. The City Temple was burnt out. Only the walls remain, and the interior is a mass of charred wood. Chelsea Old Church was demolished; Christie's received a direct hit and is in ruins, fire adding to the destruction. Maples was burnt out, and Selfridges was damaged by fire. It is also announced that during a recent raid St. Mildred's Church, Bread Street, designed by Wren, was reduced to a heap of rubble. On the outside of the church was the national memorial to Admiral Arthur Phillip, R.N. (1738 to 1814), founder and first Governor of Australia.

The Last of the Crystal Palace.

With the demolition of its North Tower on April 16, the last vestige of the Crystal Palace disappeared, except for a few minor buildings in the grounds. So familiar a feature of the landscape had become the long lines and semicircular transepts of the great glasshouse, with the tall, flanking, lantern-topped towers, that it is difficult even now to realise that the remarkable silhouette is no longer on the crest of the Sydenham heights. Perhaps, however, it is as well that the buildings were destroyed in the fire of 1936. Even those who regarded the Palace as a monstrosity would have resented its bombing by the Hun—which would undoubtedly have occurred by now. How eagerly the Luftwaffe would have seized upon so harmless and so vulnerable a target!

The demolition of the North Tower last week was a remarkable feat, described by technical observers as "a perfect job." Gelignite charges placed against six of the cast-iron columns at the base of the tower and the internal brick flue were exploded electrically from a distance of a hundred yards. After the bang, "a fraction of a second seemed to pass," writes an eyewitness, "and then the lower part of the tower shook. The middle of the tower fell downwards and the heavy upper part crumbled downwards too . . . the tower had fallen precisely where the engineers had planned that it should fall. . . . It was amazing how this tower, 280 ft. in height, had been made to fall in so small a space. Its total weight was estimated to include 840 tons of wrought and cast iron, 570 tons of brickwork, 74 tons of woodwork, and five tons of glass. . . . None of the débris fell more than 200 yards away from the base of the tower."

The towers, by the way, did not form part of Paxton's original Hyde Park buildings, but were added when the Palace was removed to Sydenham Hill. Designed by I. K. Brunel, they were erected for the purpose of supporting large tanks of water to give pressure for the working of the many fountains in the Palace and its grounds.

Staircases of 400 steps led to the encircling galleries, from which remarkable views could be obtained over six counties. Lifts were installed in the North Tower capable of making the ascent in 80 seconds. The tower came to earth a good deal more quickly. So ends the Crystal Palace. Our consolation must be that its last great feature will provide over 800 tons of scrap iron for the war effort.

Town and Country Planning Association.

We are informed that in future the Garden Cities and Town Planning Association will be known as "Town and Country Planning Association (incorporating Garden Cities and Town Planning Association)." The change comes at a time when public opinion and the Government have accepted the principle of national town and country planning. When the Association was started in 1899 there was no statutory planning in Britain. The only way of creating a really good environment for numbers of city workers was the building, mainly by private initiative, of new towns and town extensions. After the Housing and Town Planning Act of 1909 was passed the Association (then the Garden Cities Association) enlarged its name to include town planning. Later, statutory planning was extended to built-up areas. It is now generally agreed that it must be further extended to include some control of the size and density of existing towns and some guidance to the location of industry.

The Association wishes to form planning groups to study and popularise sound planning in all towns and districts, and to work out its local and regional applications. It would welcome inquiries from any persons or societies interested. Its temporary address is 10, Parkway, Welwyn Garden City, Herts.

Cardiff Civic Society.

We are glad to note that the Cardiff Civic Society, which has just issued its seventh annual report, 1939-40, is carrying on during the war, under difficulties, of course, and with reduced activities. It is important that such societies should be kept in being ready for work when the time comes.

A Presentation.

Upon his retirement after thirty-nine years' service, Mr. C. H. Riley, L.R.I.B.A., Bucks County Architects, has been presented by members of the Bucks County Council and others with a silver tea service as a token of regard and esteem. The presentation was made by Sir Leonard H. West, Chairman of the County Council.

A Retirement.

Mr. G. H. Bell, Deputy Borough Engineer and Surveyor, of Swansea, retired on April 24 on the completion of 49¼ years' service with the Corporation. The Highways Committee has recorded its keen appreciation of the long and faithful service which Mr. Bell has rendered to the Swansea Corporation.

Ministry of Works Appointments.

The Minister of Works and Buildings announces the following appointments:—

Sir Geoffrey Whiskard, K.C.M.G., C.B., at present High Commissioner in the Commonwealth of Australia for His Majesty's Government in the United Kingdom, to be Permanent Secretary.

Mr. Hugh Beaver, M.Inst.C.E., to be Director-General, Works and Buildings.

Mr. William Leitch, C.B., to be Deputy Secretary, and to act as Secretary till Sir Geoffrey Whiskard takes up duty.

IN 1916.

Extract from *The Builder*, April 21.

"It may be rather too early to speak about after the war, but it is certainly not too early to prepare for that time. . . . Then the eyes of the whole world will be turned towards England, and then will be the time to show what we can do. For this purpose a showroom will be needed . . . where our products of the past and present and our aims and intentions of the future may fittingly be exhibited. In other words, an 'Empire Exhibition' will be most desirable to help in this development."—From a letter.

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COMING EVENTS

Friday, April 25. Institution of Structural Engineers. Luncheon: Dorchester Hotel, W.1. 1 p.m.

Friday, April 25.—B.B.C. First of a new series of fortnightly talks on "We Led the Way." Mr. J. F. J. Smith will inaugurate the series. Home Service. 9.25 p.m.

Tuesday, April 29. Housing Centre. Luncheon: Miss Levison on "Rest Centres in Bethnal Green." 1 p.m.

Tuesday, April 29. Institution of Civil Engineers. Professor E. N. da C. Andrade on "The Mechanical Behaviour of Solids." 1.30 p.m.

Tuesday, April 29. Committee of Technicians in the Building Industry. Discussion on "Democracy: The Foundation of Technical Progress," to be opened by Mr. C. R. Vinycomb, 9, Great Newport-street, W.C.2. 6 p.m.

Thursday, May 1.—Incorporated Association of Architects and Surveyors. Mr. F. R. Yerbury on "Trend of Architecture in Europe, 1918-1939." 75, Eaton-place, S.W.1. 5.30 p.m.

REBUILDING LONDON IN 1666 & NOW

By B. S. Townroe, Hon. A.R.I.B.A.

THE rebuilding of London to-day after air-raid damage presents many of the same problems as those which our forefathers faced when most of the City of London was burnt out by the Great Fire. In the first week of September, 1666, between Sunday and Wednesday, more than three-fifths of the City was destroyed. According to Mr. T. F. Reddaway, whose book on this subject, published recently, is a treasure of careful scholarship and research, the Great Fire destroyed 13,200 houses, the Royal Exchange, the Custom House, the Halls of 44 City Companies, the Guildhall and nearly all the City buildings, St. Paul's Cathedral, and 87 parish churches. In addition, furniture and commodities, valued at over three and a half million pounds, were burnt.

Mr. Reddaway, under the terms of an Esher Research Studentship, awarded by the Trustees of the London Museum, has discovered much fresh information on the story of the rebuilding. Curiously enough, according to recent evidence, Sir Christopher Wren was not the principal architect appointed for the rebuilding, and was, in fact, only one out of six Commissioners. Documents now available give Wren the credit for the Fleet Canal, but do not show him to be the rejected creator of a miraculous new city. "The focal point is the struggle of the community to survive destruction."

When this war comes to an end many communities, not only in London, but in cities and towns like Birmingham, Bristol, Portsmouth, Coventry, will have to struggle to repair the ravages of war. The history of the rebuilding of London after the Great Fire contains many a warning for the future. It was wisely decided in October, 1666, to make a careful survey of the ruined city, and the King and his advisers urged the creation of an entirely new ground plan. But the necessary information on which such a plan could be based was not available. Actually there was a deadlock, for the streets could not be cleared, and it was therefore impossible to stake out the various properties. In fact, three years after the fire John Evelyn in his Diary reports that more than a third of the foundations had still to be staked. Without the help of a survey the redistribution of properties was impossible. Accordingly, land could only be acquired for improvements by means of direct purchase. This meant that compensation in cash had to be paid to landowners whose land was expropriated for the public good. Improvements therefore depended on the amount of the funds available, and both the State and the City of London were at that time suffering badly from lack of money. Finance was the first, and indeed the major, obstacle which delayed rebuilding after the Great Fire.

In our day we are more fortunate in the data available, which includes careful maps and surveys, elaborate records in the hands of local authorities, a well-organised Land Register, and even architects' drawings and photographs of many of the historic buildings. The task of preparing a survey is not as difficult in 1940 as it was in 1666. But the problem of paying for restoration will obviously be immense, and no one can prophesy at present how far either the State or local authorities will be in a position to carry out rebuilding on an ambitious scale.

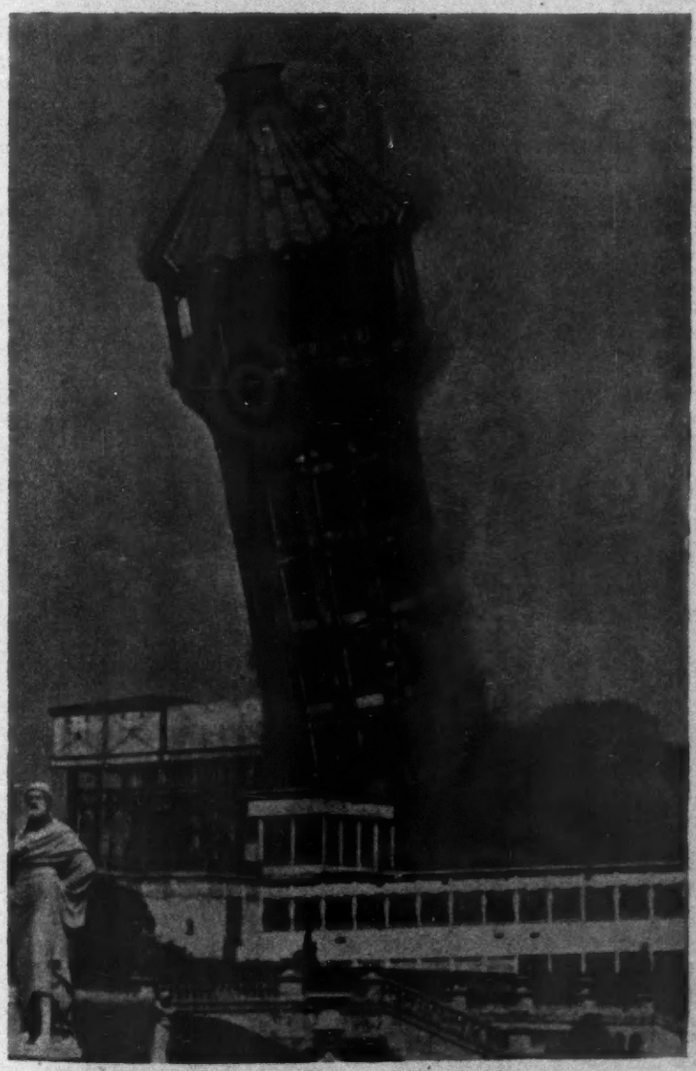
Finance will be the limiting factor, which will not be removed however determined the idealists may be to press ahead with ambitious plans of replanning. We shall, in short, have to cut our coat according to our cloth. Otherwise we may find ourselves again in the predicament which occurred at the end of 1666 when the City of London had to slow down its activities. Or to take a more recent example, it is as well that we should not forget the housing enthusiasm after the last war and all the magnificent schemes for new towns, approved by Dr. Addison, and then the descent of the Geddes axe and some years of reaction and suspension of activities.

Another factor which caused delay in the rebuilding of London in 1666 will also affect restoration in the present century. In the reign of Charles II, materials at first appeared to be available in quantity. The timber trade was well organised and ready to meet the inevitable demand. But at that time, as to-day, there was a war being waged with enemies on the Continent. The Privy Council in 1666 discussed the question of preserving domestic supplies, particularly the oak needed for the building of warships. Accordingly, supplies of timber for the building of London had to be brought across from Ireland and from Norway and Sweden, and this took time.

The King, however, from the first urged upon the City the wisdom of rebuilding in brick and stone and the abandonment of timber houses which had proved so inflammable. To rebuild 13,000 houses in brick involved, however, the erection of a number of brick kilns. The manufacture of bricks necessitated the carrying of coal, and many colliers bringing coal from Newcastle were held up by the Dutch blockading ships. Chance has left clues to certain areas used in London, one near the present Tottenham Court-road, and another near Windmills in Moorfields, where the ground was cut up for brick building. Unregulated private enterprise, however, failed, and legislation was brought in which has a curiously modern sound in these days of controllers of brick and cement. The Bill was for "Regulating the Making of Bricks and Tiles," and prices were fixed by authority.

The demand for stone was so great that new sources of supply had to be opened up. Accordingly, we find over 50,000 tons of stone being brought from Portland for the building of St. Paul's. Other quarries, some of which are still in use to-day, which supplied stone were in Burford and Headington in Oxfordshire, at Beer in Devonshire, at Reigate and Guildford in Surrey, at Tadcaster in Yorkshire, at Ketton in Rutland, and at Caen in Normandy.

There was also the problem of obtaining the necessary labour. The highly paid London labour market was open to building operatives from all parts of the



THE LAST OF THE CRYSTAL PALACE (See Notes and News, page 402.)

country. The London craftsmen at first objected to carpenters, joiners, bricklayers and plasterers, whom they regarded as foreigners, being brought in to the City, but they objected in vain. Operatives, ex-soldiers demobilised at the end of the war, and apprentices came to London, where regular work and high wages could be obtained. The records show carpenters coming from Ireland, painters from the Home Counties, and journeymen from parts of Wales. Within four years the strong trade unions of those days, the Carpenters', Masons', Bricklayers', Joiners' and Plasterers' Companies, sent in a joint petition against foreigners working on the rebuilding without the necessary qualifications of apprenticeship.

The progress of restoration was disappointingly slow. Actually, ten years elapsed before public buildings and houses had been reconstructed. The rebuilding was carried out piecemeal without a proper plan or timetable. This, again, meant delay. Finally, ten years after the Great Fire, the new city had been restored, but not replanned.

Here, again, there is a clear warning to the authorities to-day. An ordered building industry is essential if we are to repair within reasonable time widespread air-raid damage. There must be planning in advance, a careful programme and efficient organisation. The task which may well rest upon Lord Reith and the Ministry of Works and Building is far larger and more responsible than is generally realised. If in 1666 the rebuilding of 500 acres took so long and meant such an enormous effort, how much greater will be the British task when the time comes to restore the damage inflicted by the Nazi bombers?

A Mayflower Church Destroyed.

Dedicated to the memory of the London pilgrims who sailed in the Mayflower in 1620, the Church of the Pilgrim Fathers, Southwark, was destroyed in a recent raid. The history of the church goes back to the beginning of the seventeenth century, and some of the Pilgrim Fathers were members of the original congregation. A pulpit Bible containing the signatures of English and American preachers who have delivered the annual Pilgrim Fathers sermon was destroyed in the fire.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Architects and Surveyors: Government Neglect.

To the Editor of *The Builder*.

Sir,—There is no small amount of controversy in the allied professions, and even in the lay Press, on the subject of the Government's employment of civil engineers on work more suitably performed by architects and surveyors. The criticism of this policy is particularly applicable to the case of camp layout and construction. And is the work of the quantity surveyor, as watchdog of expenditure, being adequately recognised when Government contracts are being issued? The only answer so far vouchsafed by the Ministry of Works and Buildings is the appointment, announced in *The Times* (April 22) of a civil engineer to be Director-General, Works and Buildings.

G. B. J. Athoe, Secretary,
The Incorporated Association of Architects and Surveyors.
75, Eaton-place,
Westminster, S.W.1.

National Planning.

To the Editor of *The Builder*.

Sir,—The idea of large-scale planning—as opposed, presumably, to the more democratic idea of regulated organic growth—has a very good Press at the present time, though the remark in your leading article on April 18 that popular interest in it is a sign of national morale is too flattering to be taken seriously.

Is there any popular demand for planning on the all-embracing scale that appears to be contemplated? I doubt it; for such planning must go far beyond mere building layouts and water supplies, however big; and expropriation cannot stop short at landowners.

But assuming for the moment that a democratically-minded people are demanding to be planned—if such a paradox can be admitted—it would have to be assumed that they have decided what they want and have so instructed their administrators. I believe that such instructions as would be given could not be implemented by the sort of planning from the top that is proposed which, to all appearances, takes for granted a continuation of the out-of-date monetary/economic system of the past which produced artificial poverty, world-wide frustration of human effort, and the enforced ultimate export of bombs and bullets. Planning artificial scarcity and poverty will not abolish them, however big the planning authority.

Before planning, as every architect knows, one must find out the will of the building owner and all the conditions and limitations which will affect it. In the case of national planning that will has not yet been either stated or even asked for; indeed, politicians have worldly-wisely refrained from discussing what it may be. But the conditions and limitations of the old monetary/economic system are well known; conditions of very great real plenty of both things and people, sabotaged to suit the limitations of a geocentric, wrongly accredited, and entirely out-of-date money system.

To be of any real use the first efforts in national planning should be directed towards securing economic freedom for the individual by means of the transference to him of his own (national) credit; without that we fall into the trap of planning for a totalitarian State.

Arthur Welford.

Saxmundham, Suffolk.

The Late Mr. F. W. Troup.

To the Editor of *The Builder*.

Sir,—I should like to correct a printer's slip in my "Appreciation" which you published in your last issue. In referring to Mr. Troup's engineering laboratory at Cambridge, I said: "The Fen was then a *wild* place," which you have printed "*wide* place" (italics mine in both cases). This seemingly slight error renders unintelligible the point that I wished to make.

Theodore Fyfe.

Cambridge.

OBITUARY

Mr. S. Huntley Egan, F.R.I.B.A.

We regret to record the death of Alderman Stephen Huntley Egan, J.P. Mr. Egan, who was Mayor of Hendon in 1938, was elected a Fellow of the R.I.B.A. in 1925. He was a member of the firm of Emden, Egan and Co.

Mr. W. H. Wood.

We record with regret the death, at Wolstanton, of Mr. W. H. Wood, a well-known North Staffordshire architect. Mr. Wood, who was 60, was an active partner until his retirement last year in the firm, which his father founded, of Messrs. Wood, Goldstraw and Yorath, architects, Tunstall. Mr. Wood shared in the designing of many important public buildings, schools, churches and factories in the district. He was a member of the North Staffordshire Architectural Association, and almost from its inception acted as Surveyor to the old Tunstall Council.

Hackney Borough Engineer.

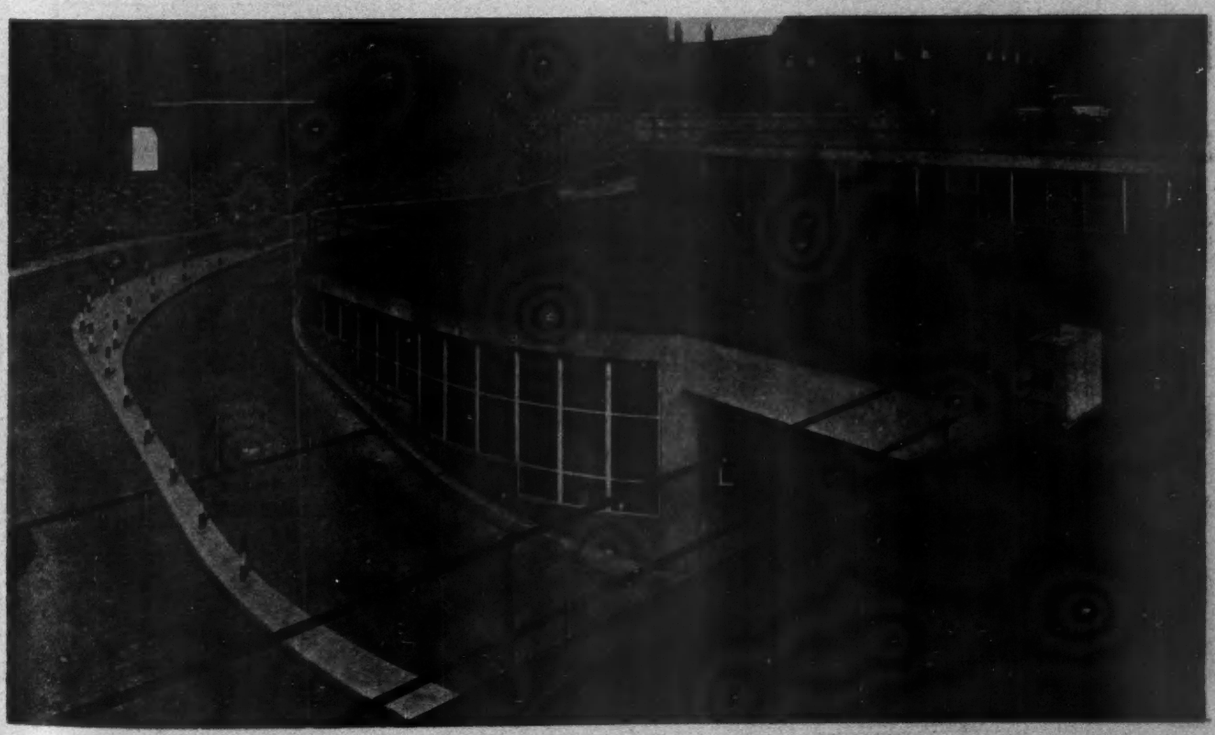
At his own request, on grounds of health, Mr. Percival Holt, for many years Borough Engineer and Surveyor of Hackney, has been placed on superannuation. His deputy, Mr. G. L. A. Downing, has been recommended for the post. The position of Deputy Borough Engineer, which carries with it a salary of £750-£25-£850, will be advertised.

AIR RAID DAMAGE AT ST. PAUL'S. (See Notes and News, page 402.)

FRONT TO MYRTLE-STREET. *Below:* ROOF PARKING SPACE.

A MOTOR SERVICE STATION, LIVERPOOL

MR. RICHARD NICKSON, M.A., A.R.I.B.A., ARCHITECT.
IN ASSOCIATION WITH MR. ALFREDO MARTINEZ.



MOTOR SERVICE STATION, LIVERPOOL.

MR. RICHARD NICKSON, M.A., A.R.I.B.A., ARCHITECT, IN ASSOCIATION WITH MR. ALFREDO MARTINEZ.

PROBLEM.—At the present stage the building consists of motor service station and showrooms, with offices, and a car-park over on what will be future garage floors. Owners desired ramps in preference to lifts.

SITE.—A strictly limited site behind the Philharmonic Hall. The set-back in Myrtle-street was required by the Corporation, who also refused any traffic entrances on this street.

PLAN.—Planning was complicated by four factors: limited site, building and roofs to be fully used after completion of first section, ramps to be employed, and showroom in front desired to have greater height than was necessary for service station behind. The problem was solved by using "staggered" floors. All cars enter from Sugnall-street; those for servicing or display are kept on the ground floor, those for parking ascend the ramp and use either the present roof of the lower section of the ground floor or the roof of the higher section of the ground floor. It should be noticed that the enclosing walls of the upper plan are not yet built. Turning radius is 50 ft. Parking aisles are 15 ft. and carriageways are 20 ft.

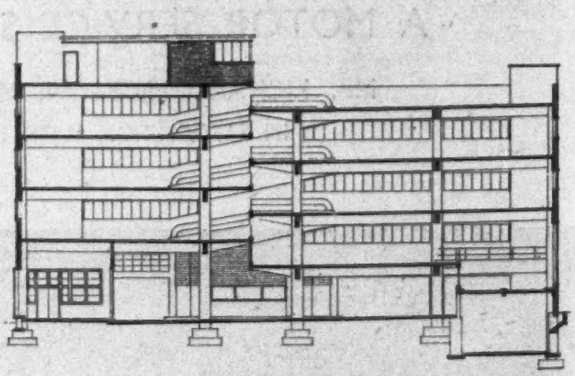
CONSTRUCTION.—R.c. framing and floors. External walls are 11½-in. cavity. The building is insulated from Philharmonic Hall by creosoted cork at wall junctions and by 9-in. and 2½-in. air spaces between parallel walls. Double cantilevers were used in the centre of the building as they allowed an economical spacing of columns.

EXTERNAL FINISHES.—2½-in. bricks with $\frac{7}{16}$-in. horizontal joints. Showroom windows, extruded bronze. Entrance doors, black and red.

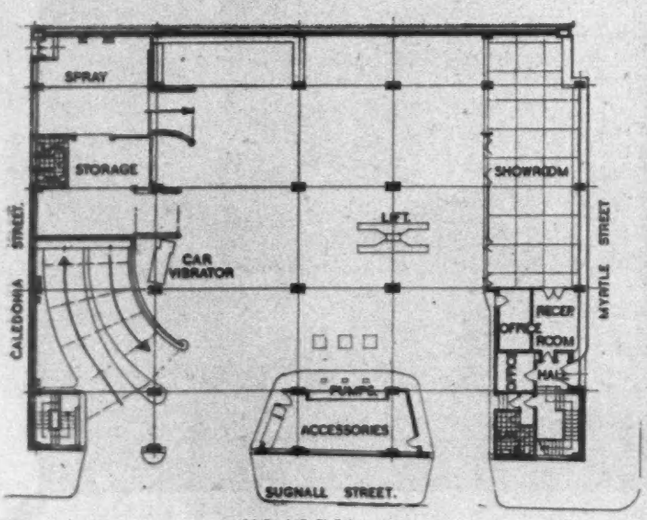
COST.—Price per cubic foot, 7¾d. Contract price, £7,850.

The general contractors were Messrs. R. Costain & Sons, Ltd. Sub-contractors and suppliers were: James Kenny, demolition; Penmaenmawr and Trinidid Lake Asphalt Co., Ltd., asphalt; Trussed Concrete Steel Co., Ltd., reinforced concrete; Chance Bros. & Co., Ltd., and Pilkington Bros., Ltd., glass; Henry Hope & Sons, Ltd., patent glazing; Killick & Cochran, central heating; Winstanley & Lambert, and General Electric Co., Ltd., electric light fixtures and ventilation; Quiggin Bros., Ltd., door furniture; E. Wilson (Collingwood), Ltd., folding gates; Sefton Lift and Shutter Co., Ltd., roller shutters; Synchromatic Time Recording Co., Ltd., clocks; General Electric Co., signs.

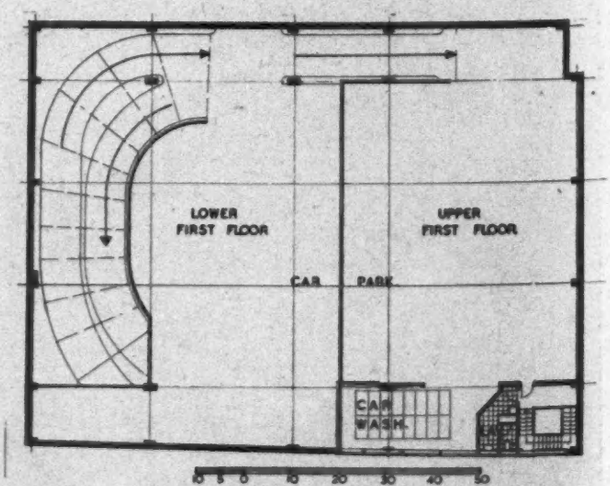
CLEARSTOREY AND CANTILEVERS ON GROUND FLOOR.



SECTION WHEN COMPLETE.



GROUND-FLOOR PLAN.



LOWER FIRST- AND UPPER FIRST-FLOOR PLANS.

MAIN STAIRCASE, MYRTLE-STREET FRONT.

A MOTOR SERVICE STATION, LIVERPOOL.

MR. RICHARD NICKSON, M.A., A.R.I.B.A., ARCHITECT, IN ASSOCIATION WITH MR. ALFREDO MARTINEZ.

WAR-TIME HOUSING DEVELOPMENT IN SCOTLAND

Lord Reith, during his recent visit to Clydeside, is reported to have said that the damage caused by the enemy air attack to the residential areas was as severe as anything he had seen. During his visit, Lord Reith discussed the various aspects of the reconstruction problem, as applied to the area, with Mr. Sam Bunton, A.R.I.A.S., who has been appointed Reconstruction Architect in a Clydeside area. Mr. Bunton's name is well known in Scotland, but little of his work has been published in England, and we are glad, therefore, to be able to illustrate some of his more recent designs.

Mr. Bunton has for a long time been associated with the Scottish Special Housing Association, Ltd., and has prepared many designs on their behalf. Figs. 2, 4 and 6 show his designs for types of houses now being erected by the Association for war-time needs. This scheme, which consists of 372 houses, is of particular interest in that a large proportion of the houses are being built with concrete walls, floors and roofs and staircases.

As the houses were urgently required the plans were prepared to permit the maximum amount of standardisation in construction without sacrificing design and also to allow the optimum economy in materials where the supplies were controlled, e.g., only ¼ of a standard of timber per house is being used. The Association has, for a number of years, made use of poured cellular concrete walls, 8 in. thick, for its housing schemes. This type of wall has proved satisfactory in every respect and is now being used on a large scale in conjunction with concrete floors and roofs for the first time.

MR. SAM BUNTON, A.R.I.A.S., WHO HAS JUST BEEN APPOINTED RECONSTRUCTION ARCHITECT IN A CLYDESIDE AREA.

Figs. 3 and 5 show designs for blocks of flats which have been prepared for other war-time developments on behalf of the Association.

Fig. 8 shows a community centre for the Burgh of Kilsyth. The execution of the whole of this scheme was held up at the outbreak of war, but the council offices with council chamber over are now in course of erection. The scheme is noteworthy as an illustration of the progressive character of the smaller Scottish burghs.

Figs. 1 and 7 illustrate the layout plans for housing schemes at Kilmarnock and Townhead, Coatbridge. These layouts were prepared on behalf of the Scottish Special Housing Association and parts of the schemes have already been carried out. The parallel between this

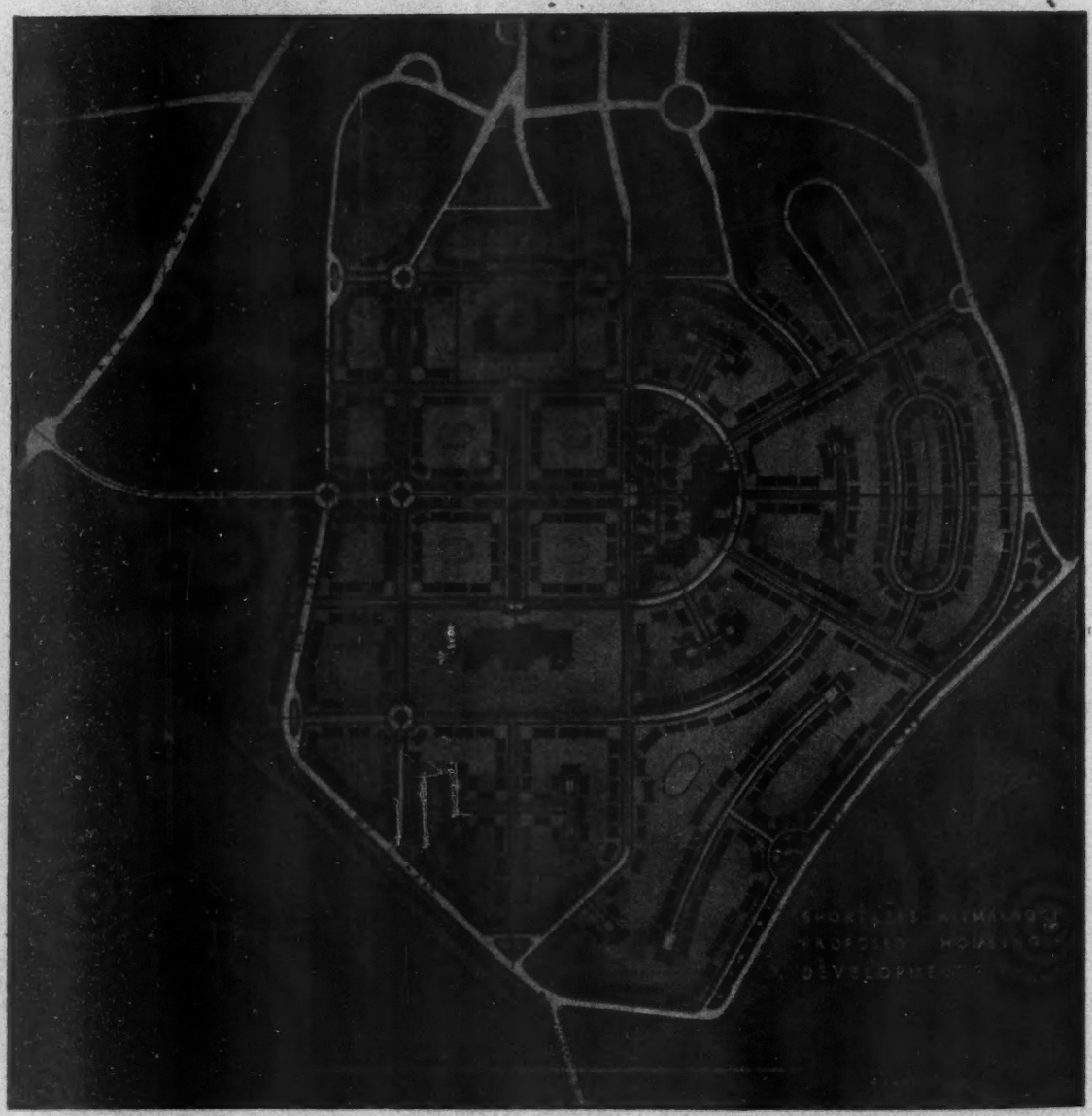


FIG. 1.

MR. SAM BUNTON, A.R.I.A.S., ARCHITECT.

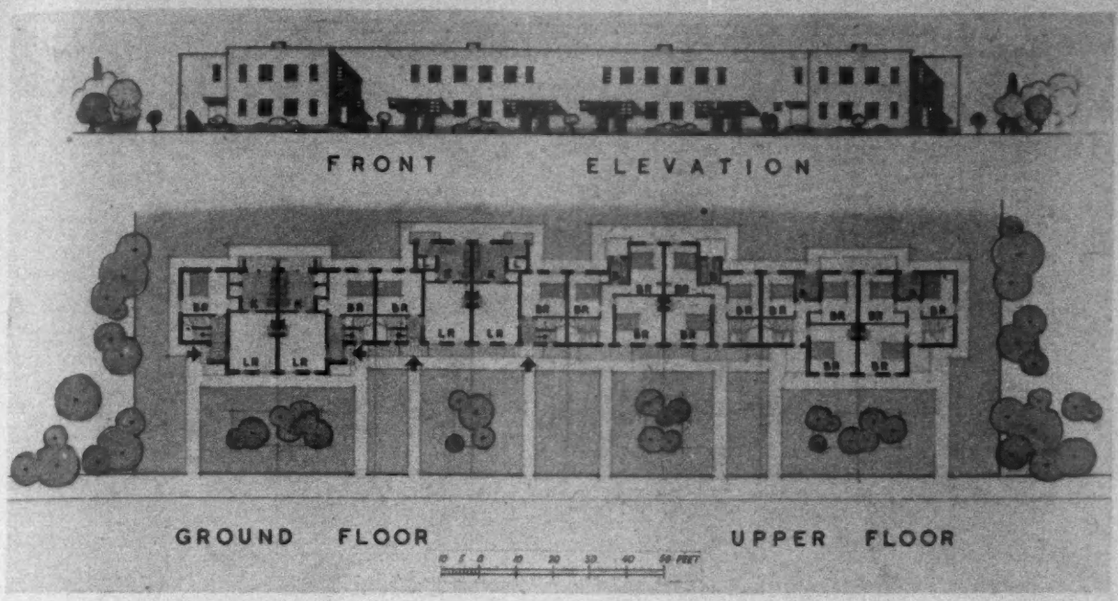


FIG. 2. FIVE-APARTMENT COTTAGE-TYPE HOUSES IN SCOTLAND.

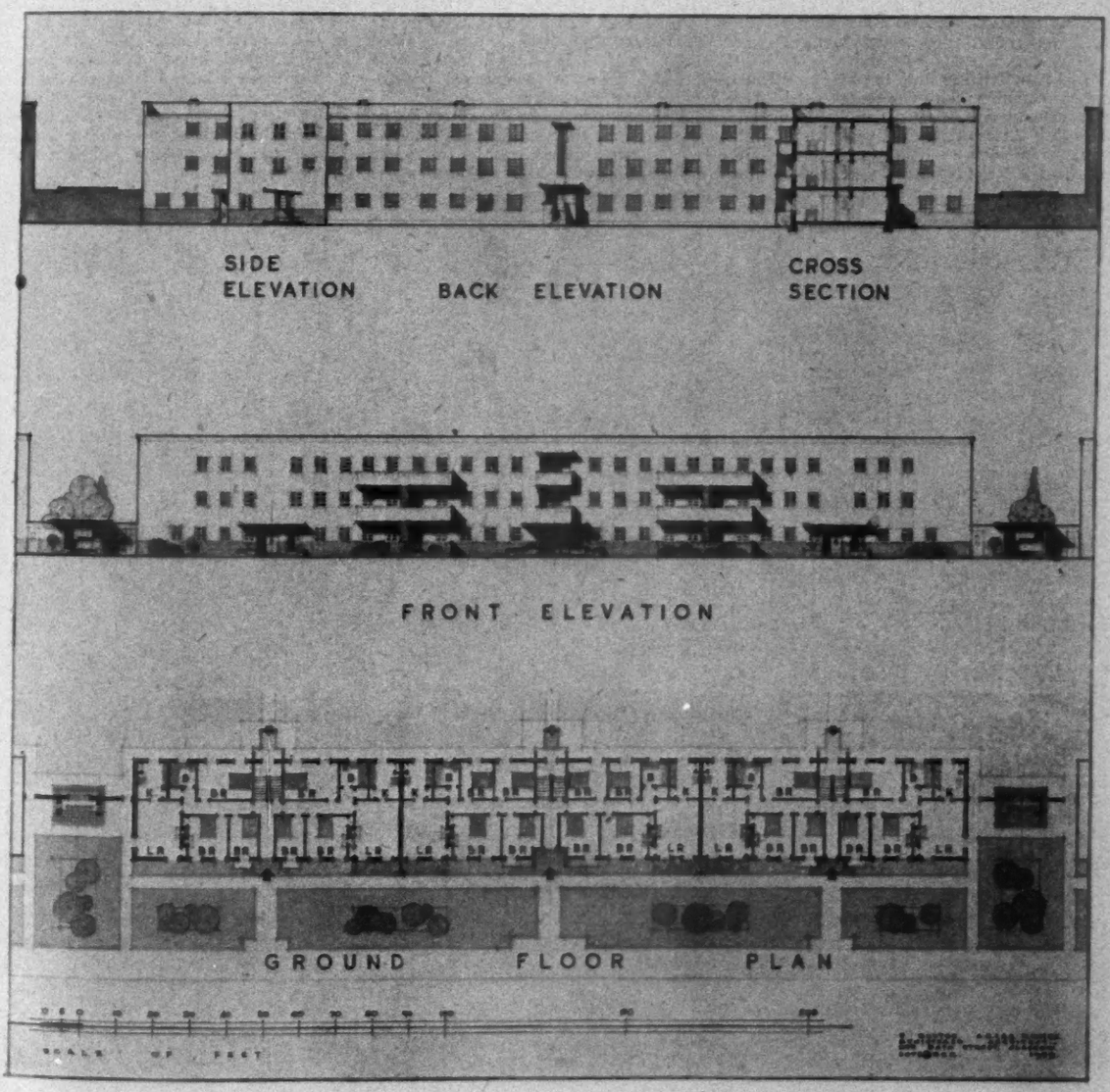


FIG. 3.—PROPOSED FOUR- AND FIVE-APARTMENT FLATS IN SCOTLAND.

MR. SAM BUNTON, A.R.I.A.S., ARCHITECT.

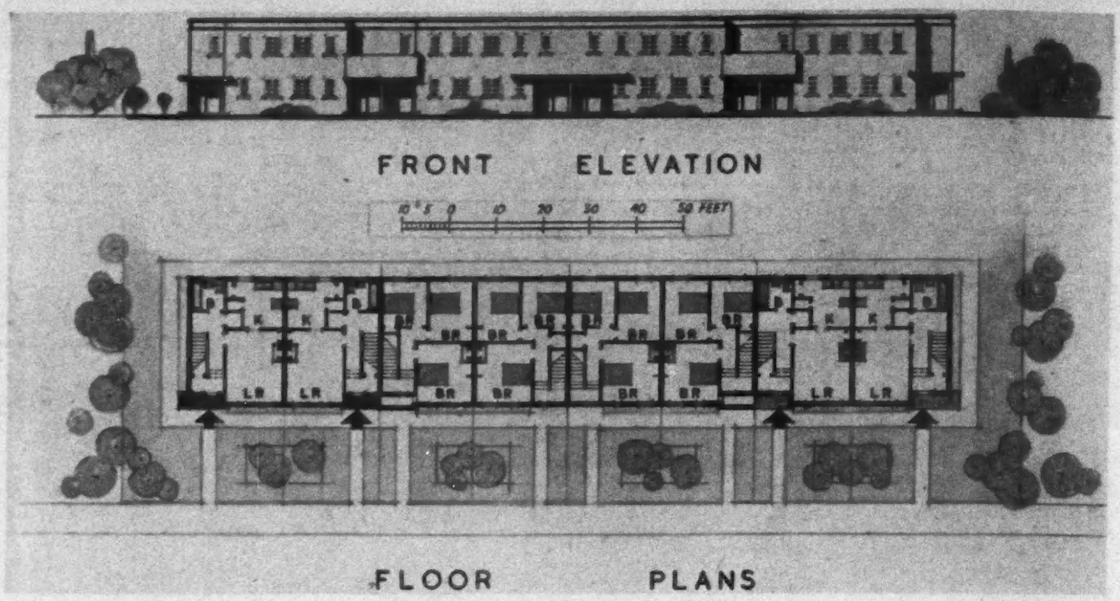


FIG. 4.—FOUR-APARTMENT COTTAGE-TYPE HOUSES IN SCOTLAND.

type of layout and the neighbourhood development advocated in America will not be overlooked.

The housing scheme of which illustrations are shown, is the first in Scotland to have concrete walls, floors, roofs and stairs. Restricted supplies of timber and the shortage of bricklayers, combined with the urgent need for more accommodation, caused the Scottish Special Housing Association to digress from the more usual methods of building.

Concrete for the walls is poured on the site into previously erected moulds of steel, the moulds being taken down and used again in approximately twenty-four hours after the concrete is poured. In order to acquire the same insulating properties as are obtained with cavity walls of brick, cellular concrete is used, which prevents penetration of moisture by capillary attraction.

Ground floors are normally of ordinary concrete poured on the site, but precast concrete beams are used for ground floors when under-building is over 3 ft. and for upper floors and roofs. The concrete stairs are poured *in situ*, using the same steel shuttering as is used for the walls. Cork linoleum or coloured asphalt may be used on the top of the concrete floors.

Brick-walled houses are also being built on the same estate, but otherwise these are of similar construction. The only timber used in the houses is for door frames, door facings and skirtings, about one-quarter standard of timber per house being sufficient for these purposes.

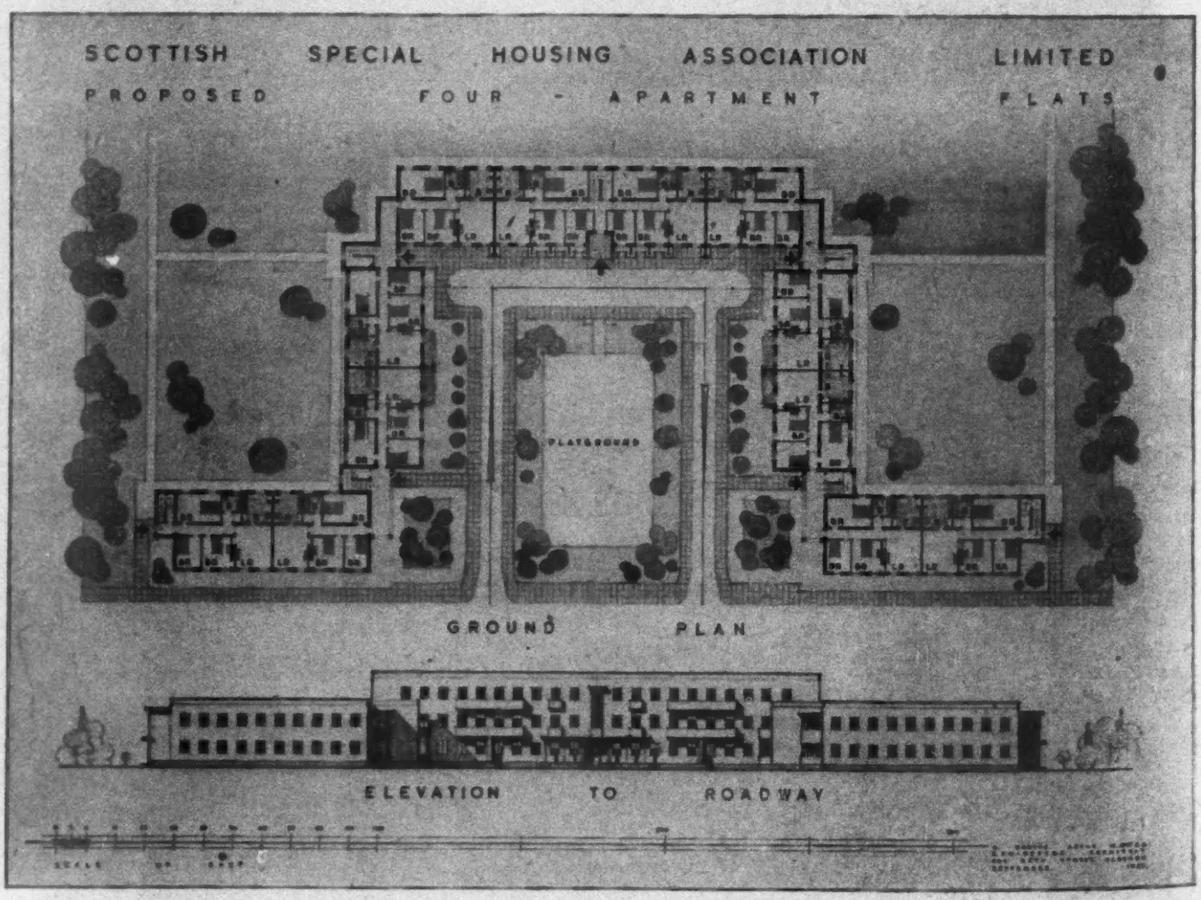


FIG. 5.

MR. SAM BUNTON, A.R.I.A.S., ARCHITECT.

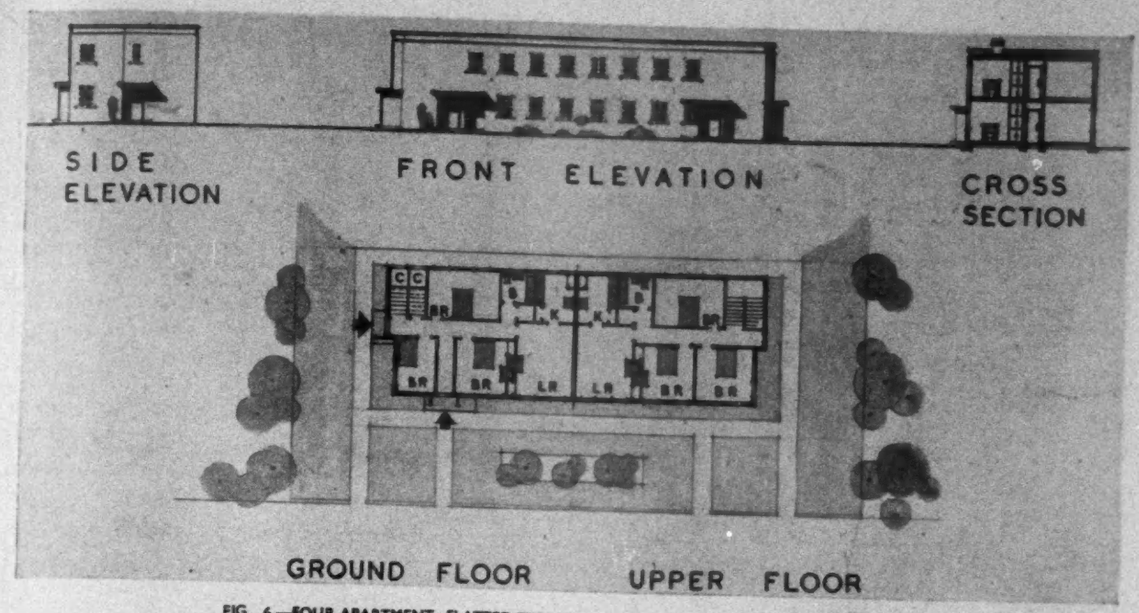


FIG. 6.—FOUR-APARTMENT FLATTED-TYPE HOUSES IN SCOTLAND. Below: FIG. 7.

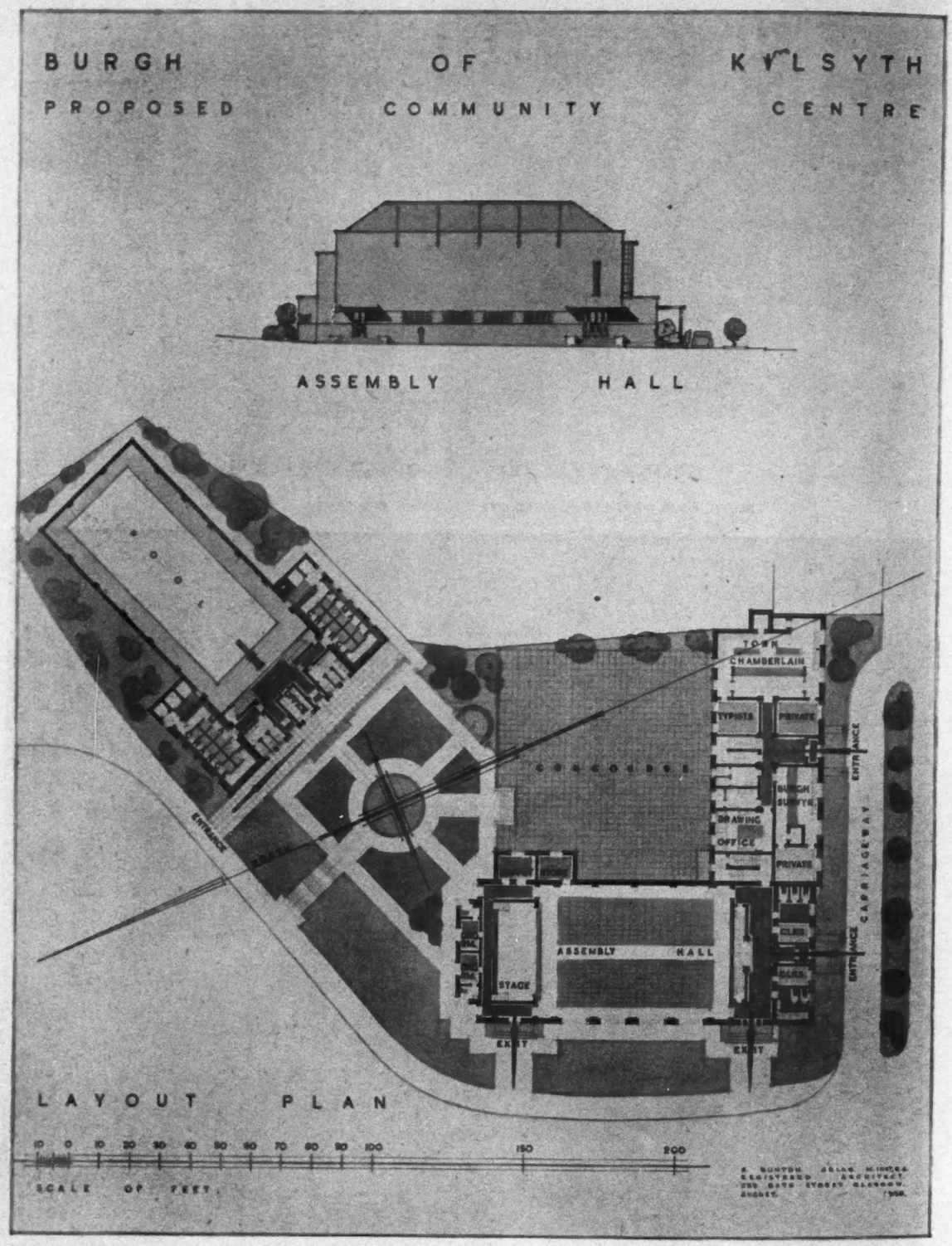


FIG. 8.

MR. SAM BUNTON, A.R.I.A.S., ARCHITECT.

LAW REPORT

MEANING OF WORD "SUITABLE" IN WORKMEN'S COMPENSATION ACT.

COURT OF APPEAL.

Before the MASTER OF THE ROLLS and LORDS JUSTICES CLAUSON and GODDARD.

R. Hoe & Co., Ltd., v. Dirs.

This case, which raised the question as to the meaning to be put on the word "suitable" in Section 9 (3) of the Workmen's Compensation Act, 1925, came before the Court on the appeal of the applicants, Messrs. R. Hoe & Co., Ltd., of Borough-road, London, S.E., from the refusal of Judge Bensley Wells, at the Southwark County Court, to review the award he had previously made awarding the respondent, Mr. Dirs, a fitter, who had been employed by the applicants, 15s. 6d. a week compensation as a result of an accident in August, 1933, which for all practical purposes rendered his left eye useless.

Later on Mr. Dirs obtained work as a nurseryman, and as the result of an agreement between him and the appellants the amount of compensation he was receiving was reduced to some extent. At the outbreak of war, work as a nurseryman was lost to him, but on March 19, 1940, the work as a fitter at Messrs. Vickers was available for him. He, however, did not accept that employment, but in April he resumed his employment as a nurseryman.

The appellants appealed on the ground that the County Court judge was wrong in holding that the work offered to Mr. Dirs was not suitable work.

At the conclusion of the arguments the Court dismissed the appeal, holding that it was reasonably clear that the work offered was not "suitable" to Mr. Dirs, the respondent.

The appeal was accordingly dismissed with costs.

Mr. J. H. C. Goldie appeared for the appellants, and Mr. Duckworth for the respondent.

WAR-TIME BUILDING PRACTICE

By R. Cotterell Butler, A.R.I.B.A.

50.—CLASSIFICATION OF SUBJECTS; ARTICLES 1—49 INCLUSIVE

With this issue we reach the fiftieth article of the series on "War-Time Building Practice," by Mr. R. Cotterell Butler, A.R.I.B.A., and the moment is appropriate for a rapid glance over the field which has been covered. We therefore give below a classification of the subjects which have been dealt with, together with an index.—ED.

Baffles: Light and Splinter.

33. October 25, 1940, page 410.
ECONOMICAL DESIGN.
Graphic calculations.
Graphs for determination of baffle proportions.

Billeting Accommodation.

2. November 3, 1939, page 641.
GENERAL PLANNING AND LAYOUT
Orientation.
Economic aspects.
Standards of accommodation.
Camouflage. A.R.P.
Accommodation layouts.
Heating, lighting, ventilation.
Circulation.
Analytical diagrams, reference table.

3. November 10, 1939, page 670.
STRUCTURAL REQUIREMENTS.
General structural design.
Foundations, roofing, insulation.
Section of structural systems.
Frame-and-panel. Mass construction.
Foundations and floors, walls, roofs.
Analytical diagrams of systems.

4. November 17, 1939, page 698.
EQUIPMENT AND FITTINGS.
Vermin.
Supports for and structural value of fittings.
Materials and finishes.
Types of equipment.
Beds, bunks, lockers.
Locker types, sleeping units.

Blackout.

11. March 8, 1940, page 298.
IMPORTANCE OF VENTILATION.
Typical systems.
Light-baffle ventilation.
Light-trap ventilators.

12. March 15, 1940, page 330.
PRACTICAL DETAILING.
Pelmet baffles.
Screens.
Box baffles.
Roller blinds.
Materials.
Working details.

31. October 11, 1940, page 350.
LIGHT-BAFFLE ENTRANCES AND EXITS.
Proportion of screens.
General position of baffles.
Types of light baffle entrances and exits.

32. October 18, 1940, page 376.
BLACKOUT VENTILATION FOR INDUSTRIAL BUILDINGS.
Draughts.
Weather-resistance. Resistance to light penetration.
Roof ventilators.
Multiple absorption ventilators.
Types of ventilator.

Factories and Workshops.

28. September 13, 1940, page 254.
WAR-TIME CONSIDERATIONS.
Factory types. Basis of organisation.
The production factory. Machine shops.
Stores. Inspection and checking.
Special processes.
Factory types: operation sequences.

29. September 20, 1940, page 280.
CONVERSION OF PEACE-TIME WORKSHOPS.
Planning a changeover.
General accommodation.
Lighting.
Stores.
Sanitation.
Typical change-over.

30. September 27, 1940, page 304.
FACTORY PROTECTION. "SHELTER FACTORIES."
Direct hit and near miss resistance.
The area factor.
"Safety valve" construction.
Construction.
Principle and examples of safety valve construction.

Finishes for "Alternative" Materials.

27. August 30, 1940, page 206.
Surfaces: Brick, concretes, "partition block material."
Finishes: Plaster, slurries, washes, paints and distempers, limewash, whitewash, oil paints.

Provisional Building.

44. February 21, 1941, page 198.
TEMPORARY STRUCTURES.
General notes.
Alterations.
Forms of construction.
Temporary shops.
Relative bulk of goods.
Classification of shop types.

45. March 14, 1941, page 275.
CLASSIFICATION OF SHOP TYPES.
Standardisation—application in shop design.
General design considerations: windows, signs, blackout, protection, services, heating, lighting, ventilation, sanitation.
Typical standardised scheme.

46. March 21, 1941, page 291.
CONSTRUCTION: THE USE OF DEBRIS.
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Techniques: prefabrication, mass-construction.
Handling prefabricated elements.
Constructional details.
Hoist characteristics.

47. March 28, 1941, page 320.
CONSTRUCTION: ECONOMIC EFFICIENCY AND PREFABRICATION.
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Standardisation.
Elimination of site processes.
Size and proportion of elements.
Jointing.
Graphs—effect of element types on jointing necessary.

Schools: Emergency.

24. July 19, 1940, page 56.
CONVERSION OF EXISTING BUILDINGS.
Selection of premises.
Minimum classrooms.
Communal space.
Floors, staircases, windows.
Heating, sanitation.
Finishes.
Illustration of typical conversion.

25. July 26, 1940, page 80.
NEW BUILDINGS.
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Lavatory accommodation.
Staff accommodation.
Typical emergency school types.

26. August 16, 1940, page 158.
CONSTRUCTION OF NEW BUILDINGS.
Prefabricated systems.
In situ systems.
Roofs, windows, doors.
Fittings and finishes.
Alternative materials for windows and ventilators.

Semi-Permanent Jointing.

22. June 28, 1940, page 747.
REUSE OF WAR MATERIALS.
Amortisation of structures.
Jointing: frames, panels.
Mastics, fibre pads and bolts, grouting.
Roof panels.
Weather resistance.

23. July 12, 1940, page 30.
INTERNAL WALL PANELS.
Sheet materials.
Dense block materials.
Lightweight materials.
Finishes.
Typical semi-permanent joints.

Shelters.

40. January 10, 1941, page 32.
SHELTERS AND SHELTER EQUIPMENT.
Surface shelters, deep shelters.
Unit shelters—mass shelters.
Infectious diseases.
Heating, ventilation, lighting.
Damp proofing, sanitation.
Sleeping accommodation.
Increasing protection.

41. January 24, 1941, page 102.
SHELTER PROTECTION.
Bomb characteristics.
D.A. and blast bombs.
Increasing protection. Moated shelters.
"Bombproof" shelters.
The dispersal theory.
Principles and application of "moating" shelters.

42. February 7, 1941. 149.
"THE DISPERSAL THEORY."
Random bombing.
Aimed attack.
The principles and effects of dispersal.
Graphs and diagrams illustrating effects of dispersal.

43. February 14, 1941, page 173.
DISPERSAL (CONTINUATION).
Bomb distribution in practice.
Structural protection.
Effect of population density.
Infectious diseases.
Morale.
Economic factors.
Summary of effect of distribution of bomb intensities on efficacy of dispersal.

Social Service Units.

13. March 29, 1940, page 384.
GENERAL REQUIREMENTS OF SOCIAL SERVICE CENTRES.
Industrial emergency and general evacuation communities.
A.R.P. Services.
Recreation.
Food supply.
Education.
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Anylytical diagram; requirements of emergency community.

14. April 12, 1940, page 441.
GENERAL PLANNING CONSIDERATIONS.
Basic plan arrangements for typical requirements.
Emergency industrial communities.
Emergency business communities.
Evacuee communities in billets.
Evacuee communities in camps.
Basic plan arrangements.

15. April 19, 1940, page 468.
THE COMMUNAL HALL.
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Sequence of uses.
General notes on layout.
Typical hall arrangement and uses.

16. April 26, 1940, page 498.
COMMUNAL HALL: FITTINGS AND EQUIPMENT.
Storage space.
Tables, chairs, counters, etc.
Use of alternative materials.
Self-storing service equipment.

17. May 17, 1940, page 583.
KITCHENS.
General planning.
Dietetics.
Types of personnel.
Economic considerations.
Preparation sequences.
Typical service arrangements.

19. May 31, 1940, page 639.
KITCHEN FITTINGS AND FITMENTS.
Use of substitute materials.

Concrete, "partition-block materials," plastics.
General construction.
Frame and panel, self-locking panel, solid.
Finishes.
Kitchen fittings in substitute materials.

20. June 14, 1940, page 692.
HYGIENE CENTRE FOR RECEPTION AREAS.
Requirements.
Service area size.
Water supply.
Adult and child services.
Organisation.
Outline of scheme.
General views of scheme.

21. June 21, 1940, page 720.
HYGIENE CENTRE (CONSTRUCTION).
Standardisation.
General outline specification.
Foundations, floors, wall piers, wall panels, roof, windows, door frames.
Summary of fittings and equipment.
Detail working plan and cross section.

Substitutes and Alternatives.*

* See also 18. May 24, 1940, page 611.

5. Dec. 8, 1939, page 785.
MASS CONSTRUCTION.
Brickwork, concrete, "partition block materials."
Jointing considerations.
Prefabrication systems.
Importance of minimising number of joints.
Estimation of jointing.

6. December 15, 1939, page 815.
FABRICATION SYSTEMS.
Preformed-unit systems. 1, manual. 2, mechanised.
Site-prefabrication and mass-production.
In situ construction.
Alternative materials.

7. January 12, 1940, page 37.
"MASS-CONSTRUCTION" MATERIALS — practical detailing.
Foundations and floors.
Pier and beam foundations.
Raft foundations.
Pier and slab foundations.
Damp-proofing foundations and floors.
Walls; general design considerations, jointing
Foundation details, piers, lightweight walls.

8. February 9, 1940, page 182.
ROOF CONSTRUCTION, SUBSTITUTES FOR TIMBER AND STEEL.
Fabrication systems.
General design considerations.
Pitch.
Weather and fire resistance.
Thermal insulation.

9. February 16, 1940, page 210.
LIGHT R.C. ROOF SYSTEMS.
Trough-shaped beam systems.
Hollow beam systems.
"T" beam systems.
Slab systems.
General notes on materials used.
Diagram of typical light systems.

10. February 23, 1940, page 238.
LIGHTWEIGHT CONCRETE AND COMPOSITE ROOFS.
Notes on lightweight materials generally.
Lightweight slabs and preformed framework.
Rendering on fabrics.
Segmental roofs.
Permanent centering.
Typical lightweight concrete and composite roofs.

Summaries and Reviews.

1. October 13, 1939, page 547.
"THE FIELD OF ACTIVITY."
Review of possible developments in the building industry due to war conditions.
Limitations of supplies: labour and materials.
Substitutes and alternatives.
Economic efficiency in war time.
The margin of error.
Mass-production.
Decentralisation.
National planning.
Diagrammatic summary.

34. November 8, 1940, page 459
"FIELD OF ACTIVITY. 2."
The second year: a review of the past twelve months of wartime building and consideration of the immediate future.
Post-war problems reviewed.
Diagrammatic summary.

18. May 24, 1940, page 611.
SUMMARY OF SUBSTITUTES AND ALTERNATIVES FOR NON-STRUCTURAL BUILDING COMPONENTS.

Concrete	Asbestos cement.
Clay.	Building boards.
Glass.	Plasters.
Plastics.	

Tabular summary.

48. April 11, 1941, page 359.
SUMMARY OF EMERGENCY STRUCTURAL SYSTEMS.
In situ systems, traditional and specially developed.
Prefabrication systems. Site prefabrication.
Composite systems.
General notes on advantages and disadvantages of typical systems, materials and labour.
Illustrations of typical systems.

49. April 18, 1941, page 380.
SUMMARY OF EMERGENCY STRUCTURAL SYSTEMS (*continuation*).
Roof systems.
Prefabricated and *in situ*.
Site prefabrication.
Jointing and fixing systems.
Insulation thermal and sound.,
Fittings and fitments.
Illustrations of typical systems.

Synthetics for Building.

35. November 15, 1940, page 483.
DEVELOPMENT OF SYNTHETICS GENERALLY FOR THE WAR AND AFTER.
Notes on manufacture.
Portland cement filler synthetics.
Use of resins and glues.
Reinforcement and lamination.
Plastics.
Reference table to synthetics for building.

36. November 29, 1940, page 532.
PLASTICS.
The plastics industry and the war.
Resinoids.
Development of the industry.
Manufacture of plastics.
Thermosetting plastics.
Thermoplastic plastics.
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37. December 6, 1940, page 547.
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Tensile strengths.
Translucency, transparency, colour.
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Summary of common plastics.
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38. December 13, 1940, page 569.
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Applications of plastics for: pre-war, wartime and post-war building.
Structural applications.
Semi-structural applications.
Fittings, fitments and equipment.
Cements, mastics, vehicles, impregnators.
Summary of plastics for building applications.

39. December 20, 1940, page 592.
PLASTICS.
Design for production in plastics.
Practical considerations of moulding and extrusion.
Moulding thermosetting plastics.
Moulding thermoplastics.
Extrusion moulding.
Machining plastics.
Methods of moulding, and typical moulded sections.

NOTE.—Italics indicate diagrams, etc.

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WAR DAMAGE TO BUILDINGS AND LAND

WHERE CLAIMS MAY BE MADE IN LONDON.

The War Damage Commission announces that its four Regional Offices for London will be opened on Monday next, April 28. The addresses of the offices and the areas each will cover are :—

N.W. London.—Government Building, Bromyard-avenue, Acton, W.3.

Area covered.—Acton, Brentford and Chiswick, Barnet, Bushey, Cheshunt, Chelsea, Ealing, Edmonton, Enfield, East Barnet, Friern Barnet, Finchley, Feltham, Fulham, Harrow, Hornsey, Hendon, Hayes and Harlington, Heston and Isleworth, Hammersmith, Hampstead, Islington, Kensington, Paddington, Potters Bar, Ruislip, Northwood, Stoke Newington, St. Pancras, St. Marylebone, Southall, Southgate, Staines, Sunbury-on-Thames, Tottenham, Twickenham, Uxbridge, Watford, Wembley, Willesden, Wood Green, Westminster, Yiewsley and West Drayton.

N.E. London.—Finsbury-square House, 33/37a, Finsbury-square, London, E.C.1.

Area covered.—Barking, Bethnal Green, Chigwell, Chingford, City of London, Dagenham, East Ham, Finsbury, Hackney, Holborn, Ilford, Leyton, Poplar, Shoreditch, Stepney, Walthamstow, Wanstead and Woodford, Waltham Holy Cross, West Ham.

S.E. London.—Clifton House, Euston-road, London, N.W.1.

Area covered. — Bermondsey, Bexley, Beckenham, Bromley, Crayford, Chislehurst and Sidcup, Deptford, Erith, Greenwich, Lewisham, Orpington, Penge, Woolwich.

London, S.W.—55, Eden-street, Kingston-on-Thames.

Area covered.—Banstead, Barnes, Battersea, Beddington and Wallington, Carshalton, Coulsdon and Purley, Croydon, Camberwell, Epsom and Ewell, Esher, Kingston-on-Thames, Lambeth, Malden and Coombe, Merton and Morden, Mitcham, Richmond, Southwark, Surbiton, Sutton and Cheam, Wandsworth, Wimbledon.

Notifications of damage to land and buildings, or claims in respect of such damage already suffered, in any of these places, are to be made to the appropriate office. Where an owner of damaged premises has already completed Form V.O.W.1 and returned it to the District Valuer, he or she need take no action until approached by the War Damage Commission's regional office and invited to fill up a second form giving certain necessary particulars.

In the event of future damage, application should be made to the Commission's regional office, or to the District Valuer, for Form C.1, the new and simpler Form by means of which notification is to be given. This Form will also be obtainable at most Town Halls and Council Offices. A pamphlet giving a short explanation of that part of the War Damage Act which relates to land and buildings will be issued with Form C.1, and will be sent with the second Form to those claimants who have already sent in V.O.W.1.

The Commission's Regional Office is in no way concerned with the insurance of goods and chattels.

FAULTY AIR-RAID SHELTERS

By W. T. CRESWELL, K.C., Hon.A.R.I.B.A., A.S.I., etc.

RECENTLY it was announced that very many of the public air raid shelters have been, or will be, condemned by the Ministry of Home Security, and that those which were built—somewhat hurriedly, it may be—in brickwork and lime mortar, instead of cement mortar, will be closed. The lime mortar has perished, and now it is considered that they have become highly dangerous, on the assumption that the majority of them would not withstand the blast from the smallest bomb dropped a few yards away.

Many other shelters, although built in cement mortar, should also be condemned; for although they might for a time withstand a not too heavy blast, yet they are continuously dangerous to health because they are not damp-proof and are deteriorating. This criticism especially applies to surface shelters, some of which are badly designed with flat roofs, the concrete roof having no overhang at the eaves. This construction permits of the roof surface water running down the walls and percolating into the interior, thus making them well-nigh unfit for use, unless kept continually heated at a great cost.

Lord Horder recently stated that, despite all the sanitary dangers foreseen, the health of the shelterers had nevertheless remained remarkably good and that there were no shelter illnesses. He did not state this fact in reference to the defective construction alleged, but as being due to better and proper nutrition and to the fact that overcrowding has been prevented, and to the stimulating effect of cheerful social communal life.

It is said that the reason for using lime mortar was the temporary scarcity of cement. In spite of this unassailable excuse, it must be realised that enormous sums of public money have been spent on existing shelters, many of which, for the reasons given, have never been occupied, and that there is an urgent need for the building of really efficient shelters. It would be idle to suggest as a remedy to "rake out and point" the lime-mortar joints. This might succeed in keeping out damp, but would not give the strength needed so that the shelters would be able to resist blast.

No doubt there are also many private air raid shelters which have, because of the difficulty in obtaining cement, been similarly constructed and are similarly dangerous. Therefore builders are in some cases faced with the question of their legal responsibility to the private owners of such shelters. The position may be stated as follows:—

(*a*) If the contract with the builder clearly provided for brickwork in lime mortar, the private owner has no remedy unless he can show that there was an agreement or implied contract that the shelter should be dry and able to withstand blast.

(*b*) If the contract provides for a brickwork construction in cement mortar and actually lime mortar has been used, the owner has an obvious legal remedy for breach of contract. It is idle for the builder to say that he could not perform his contract because he could not obtain cement. A builder who has contracted to provide any materials which eventually he finds impossible to provide, as in this case cement, is not protected in law from the consequences of not fulfilling his contract, and is under also a liability to pay damages.

(*c*) If it can be shown that the contract was simply for an air raid shelter, with the implication that it would be built in a workmanlike and efficient manner, and that it would be reasonably fit for use as an "air raid shelter," an action for breach of the contract will lie if the shelter can be proved to be unfit for its purpose, even if there is no specification of materials and construction.

[The foregoing article arises out of a question in last week's Emergency Inquiry Bureau.—ED.]

The War Damage Act.

Mr. W. T. Creswell's third article on the War Damage Act is unavoidably held over. It will be given next week.

BOOK REVIEW

Plastics in Industry. By "Plastes." London: Chapman and Hall, 1940. 12s. 6d. net.

Surveying an industry which is at once complex and new is in any case a difficult task. This is the more so where its ramifications embrace many dissimilar fields of engineering and constructional practice, and most difficult of all where the survey is intended to be both of general interest and of practical value to the technician.

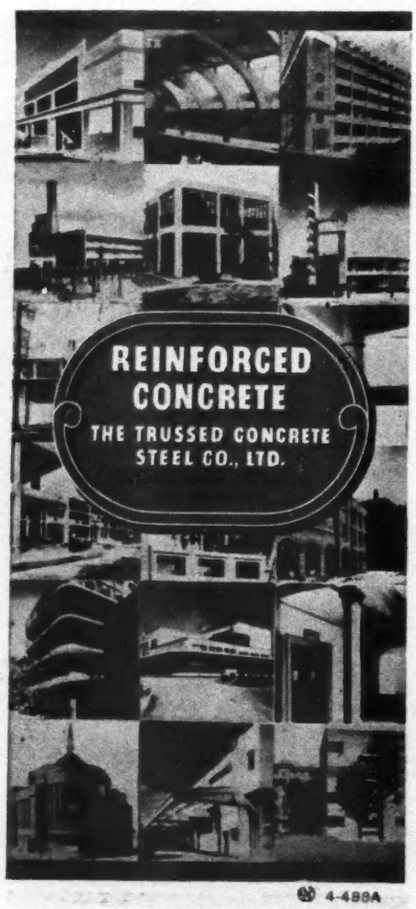
The authors have succeeded not only in summarising the present and potential field of plastics in considerable technical detail, but at the same time have produced an extremely attractive kaleidoscopic picture of a youthful and vigorous industry.

One might have expected many authors so to be carried away by enthusiasm for their subject as to paint an over-optimistic picture of the potentialities of plastics, but an outstanding quality of this work is the well-balanced and clear judgment with which both the advantages and limitations of plastics have been outlined.

Much of the authors' success is obviously due to the book being the work of collaborating experts, each section indicating a thorough grasp of the technicalities of the industry under discussion.

Architects may perhaps regret the limited space devoted to their field, but in a work of this kind more than an outline of plastics for building could hardly be expected. The real value of such a book to the intelligent building constructor is the way in which present developments in other industries should stimulate his imagination and encourage developments in the building industry.

Roughly a quarter of the book is devoted to an excellent summary of the more interesting and usable plastics, their composition and manufacture, and the remainder to surveying English, Continental and American applications of plastics in industry. Reference pages and data sheets are most informative, and the photography excellent both in selection and presentation. COTTERELL BUTLER.



4-488A

A.R.P. SCHEMES

LONDON.

Finsbury.—Housing, Establishments and Libraries Committee of B.C. recommend adaptation for decontamination purposes of a portion of washhouse at baths, at £300.

Wandsworth. — B.C. engaged following additional contractors; Cutting out concreting floors and reinstating in connection with strengthening of trenches, A. J. Styles, Ltd.; strengthening private basement shelters, W. J. Ryland; concreting of Anderson shelters, P. G. Woodley, Ltd., and Cement Waterproofers, Ltd.—Additional protective work to be carried out at two first aid posts, at £650.—Public trench work to be carried out at £5,500.

PROVINCIAL.

Accrington.—T.C. propose deep shelters. Plans by H. Sanderson, Boro' Eng.

Barrow-on-Soar.—R.D.C. propose shelter accommodation for 4,080 persons at £8,568; 47 communal shelters for 1,838 and blast protection for 73 at £3,945; 39 shelters for 1,433 and blast protection for 78, at £3,212; 91 communal shelter for 3,603 and blast protection for 43. Plans by W. Curtis, Sur., 133, Loughborough-rd., Leicester.

Bromsgrove.—U.D.C. to provide control-room.

Chester.—T.C. to provide shelter protection at certain auxiliary fire stations.

Coventry.—E.C. to erect additional shelters for St. Martin's Church hall school and for St. Michael's C. of E. schools. Plans by D. E. E. Gibson (A.), City Architect, 1a, Warwick-row.—E.C. to erect additional shelters for council schools, at £38,000.

Droitwich. — T.C. to erect additional domestic communal surface shelters. Plans by R. E. Hulse, Boro' Sur.

Durham. — R.D.C. received consent to build 10 communal shelters at Coxhoe, at £330.

Feltham. — U.D.C. placed contract with C. V. Buchan and Co., Ltd., Brighton, for waterproofing roofs of trench shelters, at £2,376.

Hebburn-on-Tyne.—E.C. approved: Waterproofing 24 shelters, D. Glen, Bk. Queen's-rd., Jarrow, £3,046; 16 shelters, Ciegwell school (Page, Son and Bradbury, architects, 75, King-st., South Shields), J. M. Black, Ltd., Glen-st., Hebburn, £2,890; 29 additional school shelters (Page, Son and Bradbury, architects), J. M. Black, Ltd., Glen-st., Hebburn, £5,160.

Leek.—R.D.C. accepted tender of A. Moss, Ltd., Market-st., Milton, Stoke-on-Trent, for communal shelters at Norton-in-the-Moors. Plans by G. R. Hewlett, Sur., Leek-rd., Endon, Stoke-on-Trent.

Morecambe and Heysham. — T.C. to demolish and rebuild 21 defective lime-mortared shelters.

Newcastle-on-Tyne. — H. Waller, Bk. Waller-st., Newcastle-on-Tyne, secured contract for cleansing station at Tower View, for City Council. Plans by R. G. Roberts, City Architect, 18, Cloth Market.

Oldham.—T.C. propose additional domestic communal shelters, at £9,570; waterproofing and erection of additional Anderson steel shelters, at £3,000.

Repton. — R.D.C. placed contracts for 10 brick and concrete public surface shelters with A. Holmes and Sons, Dallow Bridge, Burton-on-Trent, at £244 8s. 6d.; Thorpe and Perkins, Sandcliff-rd., Midway, nr. Burton-on-Trent, at £241 4s.; and W. H. Wood, Etwall, nr. Derby, at £234 12s. 4d. Plans by A. P. Hancock, Eng. and Sur.

Rickmansworth. — U.D.C. placed contract with Universal Housing Co., Ltd., Bury-la., Rickmansworth, for communal shelters, at £1,710.

Shropshire. — E.C. propose strengthening existing school shelters and adoption of new and stronger designs for future shelters. Tenders are being invited on the revised lines for shelters at schools in 12 districts. Plans by A. G. Chant, County Architect, 5, Belmont, Shrewsbury.

Swansea. — Boro' Eng. and Sur. received instructions from Ministry of Home Security that all shelters built in lime mortar which were in a bad condition were to be closed or demolished and rebuilt in cement mortar.

Tottington.—U.D.C. seeking approval for six domestic communal shelters. Plans by L. Kenyon, Sur.

Wallsend. — Contracts for shelters at (a) the Addison Potter school, and (b) St. Aidan's R.C. school, for the E.C., placed with (a) R. A. Gofton and Son, Whitley Bay, and (b) W. Leech, Newcastle-on-Tyne.

Warrington. — T.C. received instructions from M.H. for further structural alterations to first-aid post at public baths. Plans by Boro' Sur.

Wellingborough. — E. Brown and Son, Castle-st., being asked by U.D.C. to submit tender for work necessary for reconstruction and improvement of defective shelters, including pointing in cement in lieu of lime mortar.

Wellingborough. — U.D.C. approved shelters: Factory, H. W. Chapman, Ltd.; five, Ideal Clothiers, Ltd.; Castle Works, G. J. Cox; Poplar Works, R. Thompson and Co.; factory, Finedon, A. Nutt and Co.; Mill-rd. Boot Works, Sudborough and Wood; Park-rd. Works, Sudborough Bros., Ltd.

West Hartlepool.—E.C. to build additional shelters at five schools to accommodate 1,100 pupils. Plans by F. Durkin, Boro' Eng.

Whitby.—Regional Officer approved communal shelters for 3,636 people, at £12,032, for U.D.C.—North Riding E.C. to build shelters at Ruswarp school and "Whitehall."—U.D.C. approved in principle provision of decontamination centre at depot.

Worcestershire.—E.C. are to erect baffle brick walls to cloakrooms, etc., and shelters for 300 scholars at Watt Close schools, and three brick shelters for boys, two for girls and two for infants and baffle walls to cloakrooms, etc., at Stourbridge-rd. Council Schools, Bromsgrove. Plans by H. Rowe and Son, County Architects, 38, Foregate-st., Worcester.

Workington.—E.C. to build shelters at three schools. No contracts let.—T.C. to build 42 communal shelters. No contracts let.

SCOTLAND.

Glasgow.—Plans in hand for £2,280 cleansing station at police offices. Plans by T. Somers, architect.—Plans in hand for shelters at Broomside-dr. and Kelso-st. T. Somers, architect.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the head of paragraphs are those for the submission of tenders: a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING.

APRIL 28.

Luton T.C.—Installation of electric lighting in Albert-rd. and Midland-rd. tunnel shelters. F. Oliver, Boro. Eng. and Sur. Dep. £2 2s. each.

Mansfield Woodhouse U.D.C.—42 domestic surface communal shelters. L. Walker, Sur.

Southgate T.C.—Waterproofing approximately 200 Anderson shelters. Boro. Eng. Dep. £1.

APRIL 29.

Ballycastle.—Buildings at Dalriada District Institution for Governors. M. J. Feerick, clerk, Hospital.

Cumberland C.C.—A.R.P. combined depot at Cockermouth. J. H. Haughan (A.), County Architect, 4, Alfred-st. North, Carlisle. Dep. £1.

Wellingborough U.D.C.—Domestic communal surface shelters. R. Kilby, Eng.

APRIL 30.

Berkshire C.C.—Protective work at seven county police stations. J. F. Hawkins, County Sur., Reading.

Richmond (Surrey) T.C.—Reinforced concrete trench shelters. Boro. Eng., Hotham House, Heron Court.

St. Albans T.C.—Rest and refreshment room rear of City police station. F. T. Negus, City Eng. and Sur., 38, Peter-st. Dep. £1 1s.

Thurrock U.D.C.—Strengthening of existing precast concrete trench shelters by insertion of steel frames. G. F. Andrassy, Eng. and Sur. Dep. £2 2s.

MAY 1.

Southwell R.D.C.—3-bay brick garage with making of access road and other appurtenant works, on site adjoining Forest Folk Hotel, Mansfield-rd., Blidworth. S. Cooper, 8, Westgate.

MAY 2.

Llandudno U.D.C.—Sub-station. T. Ward, Eng. and Sur.

MAY 3.

Gellygaer U.D.C.—Shelters. F. Read, Sur.

Ebbw Vale U.D.C.—Extensions to electrical sub-stations. P. I. Davies, Eng. and Sur. Dep. £2 2s.

Scarborough T.C.—Alterations and additions to sub-station. H. V. Overfield, Boro. and Water Eng.

Sutton and Cheam T.C.—Alterations and improvements to public shelters. N. H. Mitchell, Boro. Eng. and Sur. Dep. £1 1s.

MAY 5.

Hemsworth R.D.C.—10 firemen's houses at Moorthorpe. S. Price, Eng. and Sur. Dep. £2 2s.

Irthlingborough U.D.C.—123 surface shelters. Sur. Dep. £2 2s.

Richmond (Yorks) T.C.—Extension to fire station. Boro. Sur.

Woking U.D.C.—Approximately 172 surface-type shelters. G. F. Hawkins, Eng. and Sur. Dep £2 2s.

MAY 6.

Folkestone T.C.—Strengthening of underground shelters. Acting Boro. Eng., Harvey Grammar School, Cheriton-rd.

Loughborough T.C.—Slum clearance in Providence-sq. and Sparrow-hill. H. Bintcliffe, Sanitary Inspector's Office, Town Hall.

MAY 8.

Rochdale C.B.—Shelter, and installation of ventilating plant in basement of Town Hall, Boro. Sur.

MAY 9.

Cobh U.D.C.—52 houses at Belmont. Town Clerk. Dep. £7 7s.

MAY 10.

Ely U.D.C.—Cattle market improvements. A. E. King, Sur. Dep. 10s. 6d.

Rickmansworth U.D.C.—Addition to A.R.P. control centre. Sur.

MAY 12.

Hayes and Harlington U.D.C.—Control and watch rooms, together with ancillary work at fire station. L. Samuel-Camps, Briars House, Church-rd. Dep. £1 1s.

Willenhall U.D.C. — 64 houses. N. D. Martin, Eng. and Sur. Dep. £2 2s.

NO DATE

Edinburgh T.C.—Treatment of Anderson shelters to minimise flooding. City Eng.

Melford R.D.C.—Demolition of six houses at Bridge-st., Long Melford. Geof. Rampling, Sanitary Sur., Newton-rd., Sudbury, Suffolk.

Ware R.D.C.—Shelters in Hunsdon and other parishes. L. J. Dale, Eng. and Sur., 97, New-rd.

PAINTING, ELECTRIC LIGHTING, HEATING, &c.

APRIL 25.

Birmingham T.C.—Interior painting of one of patients' chalets, and also certain staff quarters for Public Health Committee. Manager of Works, Bk. 311, Yardley Green-rd., Small Heath.

APRIL 26.

Ennerdale R.D.C.—External and internal painting at Galemire Hospital. Eng. and Sur., Cleator.

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23, Lawrence Lane, Cheapside, London, E.C.2

Oldham C.B.—Painting and decorating at Orthopædic institute, Gainsborough-av. T. Alker, Town Clerk.

APRIL 28.

Wandle Valley Joint Hospital Board.—Repair, painting and decoration at Isolation Hospital, Beddington Corner, Mitcham Junction. E. W. Gunner, clerk.

APRIL 30.

Inverness T.C.—Painting and glazing 58 three-apartment and 12 two-apartment houses, and also making-up of external painter work of windows of another 20 houses. T. Munro and Co., architects, 62, Academy-st.

Merton U.D.C.—Exterior painting to 80 houses. R. W. North, Eng. and Sur. Dep. £1.

Rochdale T.C.—Installation of low-pressure hot-water heating apparatus at Fleece-st. school. Boro. Sur.

MAY 3.

West Riding C.C.—Repainting and redecorating of King's school, Pontefract. H. Holmes, Clerk to Governors, Ropergate, Pontefract.

MAY 5.

Macclesfield R.D.C.—External painting of 28 houses at Lower Park-cres., Woodford-rd., Poynton. Sur.

MAY 9.

Thurrock U.D.C.—External painting of houses. G. F. Andrassy, Eng. and Sur. Dep. £1 1s.

MAY 13.

Liverpool T.C.—Interior painting of nurses' home new extension at City Hospital East and interior of hospital wards, etc. City Eng. and Sur.

MAY 26.

Stockton E.C.—Painting and decorating 13 schools and properties. Architect's Office, 191, Norton-rd. Dep. £1 1s.

MATERIALS.

The materials for which tenders are invited normally include one or several of the following:—asphalt, bricks, brooms, building lime, cast-iron pipes, cement, stoneware pipes, granite chippings, granite kerbs, gravel, gulleys, lime, manhole covers, painters' materials, plumbers' materials, road stone, slates, sand, stone, tar, tarslag and bituminous macadam, timber, and whinstone screenings. Readers should obtain full particulars by personal inquiry.

APRIL 28.

Burton Latimer U.D.C.—L. G. Smalley, Clerk.

Cwmbran U.D.C.—T. J. Price, Sur.

Inverness-shire C.C.—County Sur., Inverness.

MAY 1.

Gravesend T.C.—Boro. Eng. and Sur., Woodville-ter.

MAY 5.

Manchester T.C.—Paint. Highways Dept.

Portslade-by-Sea U.D.C.—Sur.

MAY 7.

Newcastle-under-Lyne T.C.—Boro. Sur., Lancaster-bldgs.

ENGINEERING, IRON AND STEEL.

APRIL 28.

York T.C.—New railway sidings: contracts No. 4 and 5. Chas. J. Minter, City Eng. Dep. £1 1s. contract.

MAY 5.

Monmouthshire Mental Hospital.—Waterworks at Maindiff Court, Abergavenny. Thomas and Morgan and Partners, engineers, 23, Gelliwastad-rd., Pontypridd. Dep. £3 3s.

MAY 7.

Plymouth T.C.—Open water storage basin. A. Atkinson, City Water Eng. Dep. £2 2s.

MAY 10.

Lunesdale R.D.C. — Reconstruction of reservoir, etc. A. R. Harlow, clerk. Dep. £1 1s.

ROAD, SEWERAGE AND WATER WORKS.

MAY 3.

Denby Dale U.D.C.—Surface dressing of approximately 30,000 sq. yd. of roads. E. E. B. Harrison, Sur.

Inverness-shire C.C.—Repair and maintenance of the North Moidart-rd. for Lochaber District Committee. A. Reid, District Sur., Road Surveyor's Office, Fort William.

Staffs C.C. — Making-up The Crescent, Walton-on-the-Hill, near Stafford. County Sur., Stafford. Dep. £1 1s.

MAY 5.

Yiewsley and West Drayton U.D.C.—55 yds. of 6 in. stoneware sewers and 365 yds. of 9 in. precast concrete tube, including precast concrete manholes. W. T. Morgan, Eng. and Sur. Dep. £2 2s.

MAY 7.

Finsbury, Holborn, St. Pancras and Shoreditch B.C.s.—Removal of tramways and reinstatement of roads. E. J. Elford, Consulting Eng., 84, Eccleston-sq., S.W.1. Dep. £2 2s.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1941

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Craftsmen.	Labourers.
Aberaron	1/10	1/5½
Aberdare	1/10	1/5½
Abergavenny	1/10	1/5½
Abingdon	1/8½	1/4
Accrington	1/10	1/5½
Aldeburgh	1/6½	1/2½
Aldershot	1/8½	1/4
Alfreton	1/10	1/5½
Alnwick	1/9½	1/4½
Altrincham	1/10	1/5½
Amble	1/9½	1/4½
Amersham	1/8½	1/4
Ammanford	1/10	1/5½
Andover	1/8	1/3½
Ardingley	1/8	1/3½
Arundel	1/8	1/3½
Ascot	1/8	1/3½
Ashby-de-la-Zouch	1/10	1/5½
Ashford (Kent)	1/8	1/3½
Ashford (Middlesex)	1/10	1/5½
Ashington	1/9½	1/4½
Ashtead	1/10	1/5½
Ashton-under-Lyne	1/10	1/5½
Aylesbury	1/8	1/3½
Aylsham	1/7	1/3
Bagshot	1/8	1/3½
Banbury	1/8	1/3½
Barnsley	1/10	1/5½
Barnstaple	1/8	1/3½
Barrow-in-Furness	1/10	1/5½
Barry	1/10	1/5½
Basingstoke	1/8	1/3½
Bath	1/9½	1/4½
Batley	1/10	1/5½
Beaconsfield	1/8½	1/4
Beccles	1/6½	1/2½
Bedford	1/9½	1/4½
Berkhamsted	1/8	1/3½
Berwick	1/9½	1/4½
Beverley	1/10	1/5½
Bexhill-on-Sea	1/8½	1/4
Bideford	1/8	1/3½
Biggleswade	1/8	1/3½
Billericay	1/7½	1/3½
Birchington	1/8	1/3½
Birkenhead	‡§2/-	¶
Birmingham	†1/10	†1/6½
Bishop Auckland	1/10	1/5½
Bishops Stortford	1/9	1/4½
Blackburn	1/10	1/5½
Blackpool	1/10	1/5½
Blyth	1/10	1/5½
Bognor Regis	1/8	1/3½
Bolton	1/10	1/5½
Bournemouth	1/9	1/4½
Bracknell	1/8	1/3½
Bradford	1/10	1/5½
Bradford-on-Avon	1/7	1/3
Braintree	1/8	1/3½
Brentwood	1/9½	1/4½
Bridgwater	1/8½	1/4
Bridlington	1/9½	1/4½
Brighouse	1/10	1/5½
Brighton	1/9	1/4½
Bristol	1/10	1/5½
Broadstairs	1/8	1/3½
Bromsgrove	1/9½	1/4½
Buckley	1/10	1/5½
Bungay	1/6	1/2½
Burnham-on-Crouch	1/6½	1/2½
Burnley	1/10	1/5½
Bursiem	1/10	1/5½
Burton-on-Trent	1/10	1/5½
Bury	1/10	1/5½
Bury St. Edmunds	1/7½	1/3½
Buxton	1/9½	1/4½
Byfleet	1/8½	1/4
Cambridge	1/10	1/5½
Canterbury	1/8	1/3½
Cardiff	1/10	1/5½
Carlisle	1/10	1/5½
Carnforth	1/10	1/5½
Castleford	1/10	1/5½
Caterham	1/10	1/5½
Chard	1/7	1/3
Chatham	1/9	1/4½
Chelmsford	1/9½	1/4½
Cheltenham	1/9	1/4½
Chepstow	1/9½	1/4½
Chertsey	1/9	1/4½
Chester	1/10	1/5½
Chesterfield	1/10	1/5½
Chichester	1/8	1/3½
Chorley	1/10	1/5½
Cirencester	1/7½	1/3½
Clacton	1/8	1/3½
Cleveleys	1/10	1/5½
Clitheroe	1/10	1/5½
Cobham (Surrey)	1/9	1/4½
Colchester	1/9½	1/4½
Colwyn Bay	1/9	1/4½
Congleton	1/9½	1/4½
Coventry	1/10	1/5½
Cranbrook	1/8	1/3½
Cranleigh	1/8	1/3½
Crawley	1/8	1/3½
Crewe	1/9½	1/4½
Cromer	1/7	1/3
Crowborough	1/8	1/3½
Cuckfield	1/8	1/3½
Darlington	1/10	1/5½
Darwen	1/10	1/5½
Daventry	1/8½	1/4
Deal	1/8	1/3½
Denbigh	1/9	1/4½
Derby	1/10	1/5½
Devizes	1/7	1/3
Dewsbury	1/10	1/5½
Didcot	1/8	1/3½
Diss	1/6½	1/2½
Doncaster	1/10	1/5½
Dorchester	1/7½	1/3½
Dorking	1/8½	1/4
Dover	1/8	1/3½
Dovercourt	1/8	1/3½
Driffield	1/8½	1/4
Droitwich	1/9½	1/4½
Dudley	1/10	1/5½
Dunstable	1/8½	1/4
Durham City	1/10	1/5½
Eastbourne	1/9	1/4½
E. Glam. (Mon.Val.)	1/10	1/5½
East Grinstead	1/8	1/3½
Edenbridge	1/8	1/3½
Ely	1/7	1/3
Epping	1/10	1/5½
Exeter	1/9½	1/4½
Exmouth	1/8½	1/4
Fakenham	1/7	1/3
Falmouth	1/8½	1/4
Fareham	1/9	1/4½
Faversham	1/8	1/3½
Felixstowe	1/9	1/4½
Filey	1/8½	1/4
Fleetwood	1/10	1/5½
Flint	1/10	1/5½
Folkestone	1/8	1/3½
Frinton-on-Sea	1/8	1/3½
Frome	1/7	1/3
Gainsborough	1/9	1/4½
Gateshead	1/10	1/5½
Gillingham (Kent)	1/9	1/4½
Glossop	1/10	1/5½
Gloucester	1/9½	1/4½
Godalming	1/8	1/3½
Goole	1/10	1/5½
Gosport	1/9½	1/4½
Grantham	1/9	1/4½
Gravesend	1/9½	1/4½
Great Yarmouth	1/8	1/3½
Grimsby	1/10	1/5½
Guildford	1/8	1/3½
Guilsborough	1/8½	1/4
Halifax	1/10	1/5½
Hanley	1/10	1/5½
Harpenden	1/9	1/4½
Harrogate	1/10	1/5½
Hartlepools	1/10	1/5½
Harwich	1/8	1/3½
Haslemere	1/8	1/3½
Hastings	1/8	1/3½
Hatfield	1/9½	1/4½
Haywards Heath	1/8	1/3½
Hednesford	1/9½	1/4½
Hemel Hempstead	1/9	1/4½
Henley-on-Thames	1/8	1/3½
Hereford	1/8	1/3½
Herne Bay	1/8	1/3½
Hertford	1/9½	1/4½
Heysham	1/10	1/5½
Hitchin	1/9	1/4½
Hoddesdon	1/9½	1/4½
Holt (Norfolk)	1/6½	1/2½
Horley	1/8	1/3½
Horsham	1/8	1/3½
Horwich	1/10	1/5½
Huddersfield	1/10	1/5½
Hull	1/10	1/5½
Hunstanton	1/7	1/3
Huntingdon	1/7½	1/3½
Ilfracombe	1/8	1/3½
Ingatestone	1/8½	1/4
Ipswich	1/9½	1/4½
Isle of Thanet	1/8	1/3½
Isle of Wight	1/7½	1/3½
Keighley	1/10	1/5½
Kenilworth	1/10	1/5½
Kettering	1/10	1/5½
Kidderminster	1/9½	1/4½
King's Lynn	1/8	1/3½
Kirkham	1/10	1/5½
Knowle	1/9½	1/4½
Lancaster	1/10	1/5½
Leamington	1/10	1/5½
Leatherhead	1/9	1/4½
Leeds	1/10	1/5½
Leicester	1/10	1/5½
Leighton Buzzard	1/7	1/3
Letchworth	1/9	1/4½
Lewes	1/8	1/3½
Lichfield	1/9	1/4½
Lincoln	1/10	1/5½
Littlehampton	1/8	1/3½
Liverpool	‡§2/-	¶
Llandudno	1/9	1/4½
Llanelly	1/10	1/5½
London—		
12m. radius	*1/11½	1/6½
12-15 m. radius	*1/11	1/6
Long Eaton	1/10	1/5½
Longton	1/10	1/5½
Loughborough	1/10	1/5½
Louth	1/8½	1/4
Lowestoft	1/8	1/3½
Luton	1/9½	1/4½
Macclesfield	1/9½	1/4½
Maidenhead	1/9	1/4½
Maidstone	1/8½	1/4
Malvern	1/8½	1/4
Manchester	1/10	1/5½
Manningtree	1/7	1/3
Mansfield	1/10	1/5½
March	1/7	1/3
Margate	1/8	1/3½
Market Harborough	1/9	1/4½
Matlock	1/8½	1/4
Melton Constable	1/6½	1/2½
Melton Mowbray	1/9	1/4½
Merthyr	1/10	1/5½
Middlesbrough	1/10	1/5½
Middleton	1/10	1/5½
Middlewich	1/9½	1/4½
Milford Haven	1/8½	1/4
Morecambe	1/10	1/5½
Morley	1/10	1/5½
Mundesley	1/7	1/3
Nantwich	1/9½	1/4½
Nelson	1/10	1/5½
Newark-on-Trent	1/9½	1/4½
Newbury	1/8	1/3½
Newcastle-on-Tyne	1/10	1/5½
Newcastle-u.-Lyme	1/10	1/5½
New Forest	1/8	1/3½
Newmarket	1/8	1/3½
Newport, Mon.	1/10	1/5½
Newport Pagnell	1/8	1/3½
Northampton	1/10	1/5½
Norwich	1/10	1/5½
Nottingham	1/10	1/5½
Nuneaton	1/10	1/5½
Oakham	1/8½	1/4
Oldham	1/10	1/5½
Ormskirk	1/10	1/5½
Oxford	1/9½	1/4½
Oxted	1/8½	1/4
Paignton	1/9½	1/4½
Peterborough	1/9½	1/4½
Plymouth	1/10	1/5½
Pontefract	1/10	1/5½
Pontypridd	1/10	1/5½
Port Talbot	1/10	1/5½
Portsmouth	1/9½	1/4½
Preston	1/10	1/5½
Pulborough	1/8	1/3½
Ramsgate	1/8	1/3½
Reading	1/9½	1/4½
Redditch	1/9½	1/4½
Redhill	1/8½	1/4
Ripon	1/8½	1/4
Rochdale	1/10	1/5½
Rochester	1/9	1/4½
Rugby	1/10	1/5½
St. Albans	1/9½	1/4½
St. Helens	1/10	1/5½
St. Neots	1/7½	1/3½
Saffron Walden	1/7	1/3
Salisbury City	1/7½	1/3½
Salisbury Plain	1/9	1/4½
Sawbridgeworth	1/8½	1/4
Saxmundham	1/6½	1/2½
Scarborough	1/9½	1/4½
Scunthorpe	1/10	1/5½
Selby	1/10	1/5½
Sevenoaks	1/8½	1/4
Sheerness	1/8	1/3½
Sheffield	1/10	1/5½
Shipley	1/10	1/5½
Shoeburyness	1/9½	1/4½
Shoreham	1/9	1/4½
Shrewsbury	1/9½	1/4½
Sittingbourne	1/8	1/3½
Skegness	1/9	1/4½
Sleaford	1/8½	1/4
Slough	1/9	1/4½
Southampton	1/9½	1/4½
Southend-on-Sea	1/9½	1/4½
Southport	1/10	1/5½
South Shields	1/10	1/5½
Spalding	1/8	1/3½
Stafford	1/9½	1/4½
Staines	1/9	1/4½
Stamford	1/9	1/4½
Stevenage	1/9	1/4½
Stockport	1/10	1/5½
Stockton-on-Tees	1/10	1/5½
Stoke-on-Trent	1/10	1/5½
Stourbridge	1/10	1/5½
Stourport	1/9½	1/4½
Stowmarket	1/7	1/3
Stratford-on-Avon	1/9	1/4½
Stroud	1/9	1/4½
Sunderland	1/10	1/5½
Sutton Coldfield	1/10	1/5½
Swaffham	1/6½	1/2½
Swanage	1/8	1/3½
Swansea	1/10	1/5½
Swindon	1/8½	1/4
Tamworth	1/9½	1/4½
Taunton	1/8½	1/4
Tenterden	1/8	1/3½
Thames Haven	1/10	1/5½
Thetford	1/7½	1/3½
Thorpe Bay	1/9½	1/4½
Todmorden	1/10	1/5½
Tonbridge	1/8½	1/4
Torquay	1/9½	1/4½
Totnes	1/8	1/3½
Trowbridge	1/7	1/3
Truro	1/7½	1/3½
Tunbridge Wells	1/8½	1/4
Uppingham	1/8½	1/4
Uttoxeter	1/8½	1/4
Wakefield	1/10	1/5½
Walsall	1/10	1/5½
Walsden	1/10	1/5½
Walton-on-Naze	1/8	1/3½
Ware	1/9½	1/4½
Warminster	1/7	1/3
Warrington	1/10	1/5½
Warwick	1/10	1/5½
Wellingborough	1/9½	1/4½
Welwyn	1/9	1/4½
Welwyn Gar. City	1/10	1/5½
Wells (Norfolk)	1/6½	1/2½
West Bromwich	1/10	1/5½
Westcliff-on-Sea	1/9½	1/4½
Weston-super-Mare	1/9	1/4½
Weybridge	1/9	1/4½
Weymouth	1/8	1/3½
Whitby	1/9	1/4½
Whitstable	1/8	1/3½
Widnes	1/10	1/5½
Wigan	1/10	1/5½
Wigton	1/8½	1/4
Willington	1/10	1/5½
Wilmslow	1/10	1/5½
Winchester	1/8½	1/4
Windermere	1/8½	1/4
Windsor	1/9	1/4½
Wisbech	1/7½	1/3½
Witham	1/8	1/3½
Woking	1/8½	1/4
Wokingham	1/8	1/3½
Wolverhampton	1/10	1/5½
Woodbridge	1/7½	1/3½
Worcester	1/9½	1/4½
Workington	1/8½	1/4
Worksop	1/9½	1/4½
Worthing	1/8	1/3½
Wrexham	1/9½	1/4½
Wroxham	1/7½	1/3½
Wycombe	1/9	1/4½
Wymondham	1/7	1/3
Yeovil	1/8½	1/4
York	1/10	1/5½

* Painters 1d. less than other Craftsmen. † Plus 2d. per working day. ‡ Plasterers 2/0½

¶ Tradesman's Labourers, 1/6½. Navvies and General Labourers 1/5½.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

Note: Carpenters and Joiners in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d per day Tool Allowance

For Building Trade Wages in Scotland, see page 420.

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.
The prices of soft woods are for cash on delivery.

At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.

BRICKS, &c.

The price for Stock Bricks has been altered to minimum price at works for full lorry loads. Sittingbourne district. A quotation for carriage should be obtained as the haulage question is difficult.

	£ s. d.
First Hard Stocks ..... per 1,000	£4 5 6
Second Hard Stocks ..... "	3 18 6
Mild Stocks ..... "	3 5 6
Single Rough Stocks ..... "	2 19 6
Third Common Stocks ..... "	2 10 0

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	King's Cross Station per 1,000. s. d.	To sites in W.C. District. per1,000 s. d.
Pressed	51 9	58 3
Keyed	53 9	60 3
Single Bullnose	71 9	78 3
Rustics	71 9	78 3
Whites	72 3	78 3

	£ s. d.
White Midhurst Facing Bricks (delivered London site)	3 12 6
Best blue Pressed Staffs. (London Stns.)	10 2 0
Do. Bullnose (London Stns.)	10 12 0
Blue Wire Cuts (London Stns.)	8 19 6

Best Stourbridge Fire Brick (London Stns.):—
2½ in. ..... 9 3 6 3 in. 11 1 0

GLAZED BRICKS. (London Stns.)

Best White Ivory and Salt Glazed Stretcher	28 0 0	D'ble Str'tch'rs .. D'ble Headers .. One sided two ends	36 10 0 33 10 0 37 10 0
Headers	27 10 0	Two sides & one end	38 10 0
Quoins, Bullnose and 4½ in. Flats	34 10 0	Splays and Squints	36 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

2" per yd. sup.	2 3	3" per yd. sup.	2 9
2½ " "	2 6	4" " "	3 1

CLINKER CONCRETE.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½ " "	1 8	4" " "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup.	3 0	3" per yd. sup.	3 8
2½ " "	3 6	4" " "	4 7

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 6	12" x 9" x 3"	3 0
12" x 9" x 2½"	2 9	12" x 9" x 4"	3 9

Per yard super d/d. Free on site, London.

SAND.

Thames Ballast	8 6 per yd.	delivered 2 miles radius Paddington.
Pit Ballast	8 6 " "	
Pit Sand	10 0 " "	
Washed Sand	13 0 " "	
¼ in. Shingle	8 0 " "	
¾ in. Broken Brick	12 6 " "	
Pan Breeze	8 3 " "	

CEMENT.

Best British Portland Cement, delivered London Area. Standard Specification.

	£ s. d.
4 ton loads and upwards site ..... Per ton	2 9 6
1 ton to 4 tons site	2 12 6
Alongside Vauxhall in 80 ton lots	2 7 0
"Ferrocrete" Rapid Hardening Cement—	
4 ton loads and upwards site	2 15 6
1 ton to 4 tons site	2 18 6
Alongside Vauxhall in 80 ton lots	2 13 0
Stored in Reserved Bins at works. 1/6 per ton extra.	
"Aquacrete" Water Repellent, "Blue Circle" cement, 30/- per ton extra on ordinary "Blue Circle" prices.	
"Colorcrete" Nos. 1 and 2. Coloured Rapid Hardening Portland Cement	3 19 6
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.	
"Snowcrete" White Portland Cement	10 5 0
Super Cement (Waterproof), *bags extra*	3 19 6

NOTE.—Paper bags will be charged at the rate of 6/- nett per ton. Jute sacks charged 1s. 9d. nett each and 1/6 nett each allowed if returned to works within two weeks, in good condition.
Carriage will be paid by makers on returned empty jute sacks.

Roman Cement	£3 0	Keene's Cement, White	£7 0 0
Parian Cement	7 0	" " Pink	6 10 0

Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 0 0	Sirapite, Coarse	4 5 6
" White	4 7 6	" Finish	4 13 6
Pioneer	4 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue		Grey Stone Lime	2 14 6
Lias Lime	3 0 6	Chalk Lime	2 14 6
Granite Chippings	1 15 0	Hair per cwt.	2 7 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in paper bags, £2 12 6 in 6-ton lots at railway depot.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 3 3½

BERE STONE—RANDOM BLOCK—
Free on rail at Seaton Station, per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. " 3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

PORTLAND STONE—

	s. d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 7
Do. do. delivered on road waggons as above stations, per ft. cube	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ¼d. beyond 30 ft.	

HOPTON-WOOD STONE—

F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over F.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 30 ft. super) per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) "	1 8½
1½ in. to 2 in. ditto "	1 4½

HARD YORK—
Delivered at any Goods Station, London.

Scrappled random blocks per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) "	3 5
3 in. ditto ditto "	2 8
2 in. self-faced random flags per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 0d.

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 17 0
Dry American and/or Japanese Figured Oak, per ft. cube 10 6 to	0 13 0
Dry American and/or Japanese plain Oak, per ft. cube	0 11 6
Dry sq. edged Honduras Mahogany, per ft. cube	0 15 0
Dry log-cut Honduras Mahogany, per ft. cube 12 6 to	0 16 0
Dry Cuba Mahogany, per ft. cube	0 18 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 6
Dry Australian Walnut, per ft. cube	0 19 0
Dry Queensland Silky Oak, per ft. cube	0 12 6
Dry African Mahogany, per ft. cube	0 10 0
Dry African Whitewood, per ft. cube	0 8 0
Dry English Wainscot Oak, per ft. cube	0 16 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt. 4 7 0 to	5 10 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes, 2 in. by 3 in. to 4 in. by 11 in.	43 10 0	53 0 0

Having Secured the Contract— What about the Steel Scaffolding?

TUBULAR

—S & C—

SCAFFOLDING

For the lowest Prices apply to the Oldest Firm in the Scaffolding Trade.

STEPHENS & CARTER LTD.

The British Steel Scaffolding Co.

731-761, HARROW RD., N.W.10.

Telephone No. Ladbroke 1791 (6 lines).

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	67 10 0

	Per square. s. d.
1 in. plain edge flooring	53 0
1¼ in. ditto	66 6
1 in. tongued and grooved	53 0
1¼ in. ditto	66 6

MATCHING.

	Per square. s. d.
⅜ in.	37 6
½ in.	43 0
1 in.	55 0

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	39 7 6	18 by 10	21 15 0
22 by 12	33 0 0	18 by 9	20 0 0
22 by 11	30 5 0	16 by 10	19 0 0
20 by 12	29 10 0	16 by 8	15 5 0
20 by 10	27 2 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000 f.o.r. London

Best machine-made tiles from Broseley or Staffordshire district	£5 10 0
Ditto hand-made ditto	6 10 0
Ornamental ditto	6 15 0
Hip and valley tiles (per dozen) { Hand-made	0 11 6
{ Machine-made	0 11 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

R.S. Joists, cut and fitted	£22 10 0
Plain Compound Girders	25 0 0
Stanchions	27 10 0
In "Roof Work"	32 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.
MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	22 5 0	⅜ in. to ½ in.	20 15 0
⅝ in.	21 5 0	⅝ in. to 2½ in.	20 5 0

WROUGHT TUBES AND FITTINGS.
Deliveries from works.
Deliveries from London stock further 2½% gross.
Fittings.

	Tubes. ½"/⅜" %	Tubulars. ½"/⅜" %	10/12 19/24 %	Flanges. ½"/2" %	2½"/3" %
Light weight	55½	—	48	51½	58
Heavy weight	48½	48½	40½	41½	50½
Galv. lightweight	44½	—	39½	40½	49½
Galv. heavyweight	35½	35½	31½	30½	41½

Tubes and tubulars sizes ½"/1" inclusive, charged extra of 5% less gross.
Fittings. Figs. 25/34 5% less gross discount.
Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works. per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/4½	1/1	4d.
3½ in.	1/5½	1/2½	4d.
4 in.	1/5½	1/4½	6½d.
4½ in.	1/6½	1/8	7½d.
5 in.	1/10½	1/11½	8d.

O.G. GUTTERS.

3 in.	1/9	1/5½	4½d.
3½ in.	1/11½	1/5½	6d.
4 in.	1/11½	1/8½	7d.
4½ in.	2/0½	1/9½	8d.
5 in.	2/6	2/0½	9½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/0½	1/4½	2/0
2½ in.	2/1½	1/6½	2/4½
3 in.	2/7½	1/11½	2/10½
3½ in.	3/1	2/3½	3/4½
4 in.	3/6½	2/9½	4/0½

NETT PRICES.
Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES.—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	3/4½	2/4½	2/10½
2½ in.	4/0½	2/7½	3/7½
3 in.	4/4½	2/10½	4/3½
3½ in.	4/5½	3/7½	5/0½
4 in.	4/10	4/0½	5/9½

L.C.C. COATED DRAIN PIPE.

	Pipe.	Bends.	Branches.
3 in. per yd. in 9 fts.	5/5	6/3	9/11
cwt. qr. lbs.			
4 in. 1 1 20.	7/11	7/1	12/6
5 in. 1 2 22.	9/7	12/9	19/3
6 in. 2 0 6	11/5	14/8	25/6

Gaskin, 75/- per cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(cont'd.)

	Per ton basis in London. £ s. d.		£ s. d.
IRON.—Staffordshire Crown, Merchant quality	17 2 6	to	18 7 6
IRON.—Staffordshire Marked Bars	20 0 0	to	22 0 0
Mild Steel Bars	19 12 6	to	21 2 0
Mild Steel Hoops	21 6 0	to	21 16 0
	Ex Merchant's Stock, per ton (two-ton lots).		
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24 17 6	to	27 5 0
24 gauge	25 2 6	to	27 0 0
26 gauge	25 17 6	to	27 15 0
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27 1 3	to	28 6 3
24 gauge	27 11 3	to	28 16 3
26 gauge	28 16 3	to	30 11 3
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28 11 3	to	30 8 9
24 gauge	29 1 3	to	30 18 9
26 gauge	30 6 3	to	32 3 9
	Per ton. £ s. d.		£ s. d.
Cut Nails, 3 in. and up	26 0 0	to	27 10 0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

Seamless copper tubes (basis)	per lb.	1/3
Strong sheet	"	1/6
Thin sheet	"	1/7
Copper nails	"	1/6
" wire	"	1/6

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CRUTCH HEAD S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
34/-	53/- per doz.

CHROMIUM PLATED TOILET S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
50/-	68/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
37/6	53/-	87/-	202/-	288/-	460/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
47/-	75/6	120/-	226/-	300/-	588/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
6/10	9/9	15/9	27/3	44/-	68/6 per doz.

HEAVY CROYDON BALL VALVES. SCREW IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
45/-	72/-	120/-	204/-	280/- per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
10/6	12/9	19/3	34/-	48/-	53/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
9/9	12/6	22/6	33/-	42/- per doz.

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ in.	1½ in.	2 in.	3 in.	
8 lb. Lead P.	29/-	38/-	54/-	93/-	per doz.
6 lb. Lead S.	36/-	42/-	67/-	120/-	"

SOLDER.—Plumbers, 1/5. Tinmen's, 1/8. Blow pipe, 1/10 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in drums	per gallon	0 5 4
Boiled Linseed Oil, in drums	"	0 5 7
Turpentine, in drums (10 gals.)	"	0 6 0
Genuine Ground English White Lead, per ton (in not less than 5-cwt. casks).		61 0 0
Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.		
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polsceo," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots,	per ton delivered	83 10 0
Red Lead, Dry (packages extra)	per ton	52 0 0
Best Linseed Oil Putty (1 ton lots)	per cwt.	0 17 1½
Sims. XD quality	1kn.	0 3 6

Turpentine substitute can be obtained and prices vary according to the quality from 3/- gallon upwards.

		£ s. d.
SNOWCEM CEMENT PAINT	per cwt.	2 16 0
C.M.C. CAMOUFLAGE PAINT	"	2 16 0

VARNISHES, &c.

		Per gallon.
Oak Varnish	Outside	0 14 0
Fine do.	"	0 16 0
Fine Copal	"	0 18 0
Pale Copal	"	1 0 0
Pale Opal Carriage	"	1 4 0
Best do. do.	"	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	"	0 18 0
Fine Copal Cabinet	"	1 2 0
Fine Copal Flatting	"	1 0 0
Hard Drying Oak	"	0 18 0
Fine Hard Drying Oak	"	0 19 6
Fine Copal Varnish	"	1 0 6
Pale do.	"	1 12 0
Best do.	"	1 2 6
Best Japan Gold Size		1 12 6
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 0
Knotting (patent)		0 15 0
French and Brush Polish		0 12 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY (O.Q.) AND SELECTED GLAZING QUALITY (S.Q.).

PER FOOT SUPER.

In sizes not exceeding 80 in. long or 48 in. wide or 110 united inches.

	O.Q.	S.Q.
18 oz. in 300-ft. cases	2½d.	2¾d.
24 oz. " 200 ft. "	3½d.	4d.
26 oz. " 200 ft. "	3¾d.	4½d.
32 oz. " 200 ft. "	5½d.	6½d.
24 oz. " 300 ft. "	3½d.	3¾d.
26 oz. " 300 ft. "	3¾d.	4½d.
32 oz. " 300 ft. "	5½d.	6½d.
18 oz. Obscured Sheet		5½d.
24 oz. Obscured Sheet		6½d.
Fluted, 21 oz.		9d.
Enamelled, 18 oz.		5½d.
" 24 oz.		6½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

	Per ft.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ⅜ in.	6½d.
Rough cast double rolled, ½ in.	6½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
" " 32 oz.	4 0
" Cast, ¼ in. thick	0 10
" " ⅜ in. thick	1 0
" " ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
" " " ⅜ in. thick	1 0
" " " ½ in. thick	1 2

"VITA" GLASS.

	Per ft. s. d.
"Vita" Plate Glass, about 1/8 thick	
To 7 ft. super	5 0
Over 7 ft. super	7 6
"Vita" Sheet Glass, about 18/20 oz.	2 0
Cathedral "Vita" Glass:	
¼ in. thickness	2 0
⅜ in. "	3 0
½ in. Georgian Wired "Vita" Glass	3 6

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	34 10 0
Pipe in coils	34 0 0
Soil pipe	39 10 0
Compo pipe	41 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills. per ton } £18 0 0.

BUILDING TRADE WAGES IN SCOTLAND

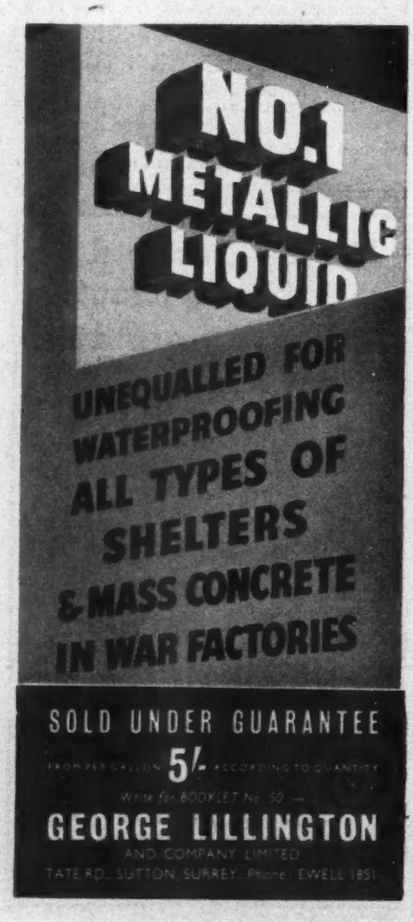
Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹
Craftsmen	1/10½	1/10	1/9½	1/9	1/8½	1/8
Labourers	1/5	1/4½	1/4½	1/4	1/3½	1/3½

Aberdeen	A	Dumfriesshire	A²	Inverness	*	Perthshire	A²
Ayrshire	A	Dundee	A	Inverurie	A¹	Peterhead	A¹
Banff	B	Dunoon	A	Kincardineshire	A²	Renfrewshire	A
Berwickshire	A²	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A²
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A²
Doune	A	Forfarshire	A²	Moray and Nairn	B	Stewartry	A²
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peebleshire	A²	Stornoway	A
Dumfries	A¹	Hamilton	A	Perth	A	Tayport	A²
						West Lothian	A

* This town has its own rates: Masons, 1/8½; Carpenters, 1/8½; Slaters, 1/8½; Plumbers, 1/9; Plasterers, 1/9½; but 1/10 is paid owing to the scarcity at present; Painters, 1/8½ and Labourers, 1/4.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 418.



THE SCOTTISH BUILDER

ABERDEEN.—CENTRE.—Plans in hand for a new communal rest centre. Mr. Albert Gardner, architect.

CARMICHAEL. — HOUSES. — Plans have been prepared by Mr. S. MacColl, architect, County Buildings, Hamilton, for new houses.

CARMYLE.—PREMISES.—Plans have been prepared for new business premises at Carmyle-rd., for J. Hawthorn.

GLASGOW.—BUILDING.—J. and P. Coats, Ltd., 153, St. Vincent-st., Blythswood, Glasgow, prepared plans for alterations and additions.—Messrs. Thomson, Sandilands and MacLeod, 248, West George-st., are the architects for additions, for William Milne, Ltd. —T. Somers, Office of Public Works, is the architect for the cleansing station to be erected at the Northern Police Station, at £2,280.—Plans prepared by the Distillers' Co., Ltd., 64, Waterloo-st., for new buildings for the White Horse Distilleries.

NEWMAINS. — PREMISES. — Plans have been prepared by Messrs. Cowie and Miller, architects, Cleland-rd., Wishaw, for the Coltness Iron Co., Ltd.

NEW BUILDINGS IN LONDON

EALING.—BUILDINGS.—Plans passed by T.C.: Messrs. J. Sears and Co. (architects, Messrs. Freeman, Hardy and Willis, Ltd., Surveyor's Dept., Rutland-st., Leicester), shop, 62, The Broadway, W.13; Messrs. Kelvin Construction Co., Ltd., offices, Longdr., Greenford.

B.S.I. and the War.

The British Standards Institution has issued a report showing how since the outbreak of war close contact has been maintained with the various State Departments and the industry. As a result of a conference held with the Director of Standardisation, the new Ministry of Works and Buildings is using the Institution as the medium for the promulgation, under its authority, of a series of War Emergency British Standards for use at the present time.

CURRENT AND PROPOSED BUILDING WORK*

Accrington. — T.C. approved: canteen, Huncoat Brick and Terra Cotta Co., Ltd.

Blackburn.—R.D.C. propose adaptation of Cherry Tree Congregational Church school for use as communal feeding and cooking centre. Plans by L. Brothers, Surveyor, Richmond-ter.

Bradford.—T.C. propose community centre, boys' club and children's creche. Plans by H. Connolly (A.), City Architect.

Bromsgrove.—Worcestershire P.A.C. propose extensions to mortuary accommodation at Institution. H. Rowe and Son, County Architects, 38, Foregate-st., Worcester. Cost £850.

Chester.—E.C. recommend repairs to heating installations at Lache and Newton schools.—Plans passed: alterations, City Club, Northgate-st.; alterations for H. F. Thomas.—City Sur. to carry out repairs to Blacon Hall farm.

Consett.—U.D.C. propose communal feeding centres. Plans by T. P. Leath, Sur.

Droitwich.—T.C. propose adaptation of property for use as communal feeding and cooking centre, at £4,596. Plans by R. E. Hulse, Boro. Sur.

Dudley.—T.C. propose community feeding and kitchen centres at Methodist church hall and Congregational church hall. Plans by F. H. Gibbons, Boro. Eng.

Gateshead.—Liddle and Batchelor, Milburn House, Newcastle-on-Tyne, and Cackett, Burns Dick and McKellar, 21, Ellison-pl., Newcastle, prepared plans for factory extensions and store.

Halesowen.—T.C. approved: structural alteratins "Plough and Harrow," "Runbow, Dare's Brewery Co., Ltd., Belgrave-rd., Birmingham 12; additions, "Shelton" Inn, Belle Vale, G. S. Twist, The Brewery, Wolverhampton-st.—T.C. proposes conversion of old Technical school for community restaurant. Plans by G. Spurr, Boro. Sur.

Halifax.—T.C. propose adaptation of property for day nursery. Plans by D. Lloyd Jones, Boro. Sur.

Hyde.—E.C. propose central canteen and local feeding centres for school children.—T.C. approved: additions for Hatchett and Co., Ltd.; workshop for J. North and Sons, Ltd.

Islington.—M.H. granted B.C.'s application for loan for repairs to buildings, and Boro. Treasurer now to submit application for further loan.—Council recommend £3,500 for sub-station and equipment.

Kendal. — T.C. approved: Alteration to premises in rear of 42, Highgate, for F. W. Woolworth and Co., Ltd.

Lowestoft.—T.C. approved: Lowestoft Co-operative Society, Ltd., for alterations to store, Clapham-rd.

Manchester.—Moston Brick and Building Co., Ltd., Kenyon-la., Moston, propose extensions to brick works.—Baxendale and Co. Ltd., 10-20, Thomas-st., propose offices, warehouses, stores, etc. McCutcheon and Walsingham, chartered architects, 180a, Chester-rd., Stretford. — T.C. approved: works, Wythenshawe, Square Grip Reinforcement Co. (London), Ltd., Drury and Gomersall, architects, Imperial-bldgs., Oxford-rd.; canteen to works, Openshaw, Francis Shaw and Co., Ltd., S. Moss, architect, 13, Portland-rd., Eccles; Fish Restaurant, Ardwick, S. G. Lowe, 3, Howarth-st., Chorlton-on-Medlock.

Morley.—T.C. approved: canteen, J. Hartley and Sons, Ltd.

Newcastle-under-Lyme.—R.D.C. propose conversion of vicarage at Madeley for communal feeding and kitchen centre.

Penmaenmawr. — U.D.C. approved: three groynes for L.M.S. Railway.

Runcorn.—U.D.C. approved: workshop, ing and cooking centre. Plans by A. B. Cunningham, Sur.

Salford.—Health Committee recommending Council to loan money for repairs to buildings.—Health Committee to borrow £4,400 to cover cost of purchase and adaptation of premises for auxiliary maternity hospital.

Sheffield — T.C. approved: workshop, offices and stores, Deakin's (Silversmiths), Ltd., 6, Earl-st.; reconstruction of showrooms, offices, stores, etc., Brook Shaw, 437, Whirlowdale-rd.; reconstruction of sales shop, Carter, Milner and Bird, Ltd., Owlerton.

Smethwick.—T.C. approved rebuilding offices, Chance Bros. and Co., Ltd.

Stanley.—U.D.C. completed plans for 12 communal feeding centres. Plans by J. R. Heslop, Sur.

Sunderland.—T.C. to carry out alterations to Citizens and Services Information Centre, at £100.

Swansea.—C.B. resolved that seven schools be externally painted during year by direct administration.—Borough Estate Agent to proceed with construction of temporary stalls on existing market site.

Urmston.—U.D.C. approved: offices to works, Trafford Park Steel Warehouse Co., Ltd.; fire engine house to works and building for Home Guard, F. Hills and Sons, Ltd.

Wandsworth.—B.C. to provide additional lavatory accommodation in Balham library and Tooting library.

Warrington.—T.C. to erect two brick garages at Borough General hospital, and decontamination laundry at Longford refuse depot.—T.C. approved: rebuilding rear of premises, W. Molyneux.

Wellingborough.—U.D.C. approved plans: extensions, factory, A. Cheney and Sons; store premises, Bignell's Ltd., York-rd., Rushden.

West Hartlepool.—In view of the lack of shopping facilities on certain estate, T.C. offered tenancy of four houses to J. W. Cameron and Co., Ltd., Hartlepools Co-op. Society and J. B. Baker, for conversion into shops.

Workington.—T.C. propose conversion of premises for use as communal feeding and kitchen centre.—Plans for extensions to fire station, prepared by A. B. Cooper, Boro. Eng.

*See also Lists of Contracts Open.

Fire Watching.

A small booklet on this subject, written by Mr. John Burke, Barrister-at-Law, has just been issued, price 6d., by Messrs. Hamish Hamilton, Ltd. It contains chapters on civil defence duties, fire-watching in business premises and the Fire Watchers Order, 1940.

Mr. Alfred Haworth.

We regret to record the death, on April 4, at Ramsbottom, of Mr. Alfred Haworth, in his 76th year. He was a director of J. H. Haworth and Co., Ltd., joinery manufacturers, and was well known to the building and allied trades through his connection as editor and director with several trade journals, including the first official journal of the National Federation of Building Trades Employers. Until his retirement in 1929 he was the editor of *The National Builder*.

DON'T TENDER UNSUCCESSFULLY

SECURE CONTRACTS WITH

THE STEEL SCAFFOLDING CO., LTD.

23, OATLANDS DRIVE, WEYBRIDGE, SURREY.
'Phone: Walton-on-Thames 614 and 615.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

Tenders for A.R.P. work will be found under "A.R.P. Schemes."

* *Denotes accepted.*
† *Denotes provisionally accepted.*
‡ *Denotes recommended for acceptance.*
§ *Denotes accepted subject to modification.*
¶ *Denotes accepted by H.M. Government departments.*

Bushey. — Kitchen and rest-room, for U.D.C.: *Cutchee & Riches, Oxhey, Watford.

Gateshead.—Temporary warehouse in Swan-st., for Sir W. G. Armstrong, Whitworth & Co., Ltd.: *Bewley & Scott, Dunston-on-Tyne.

Glamorganshire. — Maternity block at Neath, for C.C. County Architect, County Hall, Cardiff: *Direct labour, Cardiff, £2,527 10s.

Glasgow. — Works for Corporation. T. Somers, architect, Municipal Buildings: Painter work at St. Andrew's Halls, *MacCulloch & Co., Glasgow, £223 8s. 5d.; alterations at Pollockshaws police offices, *J. Allison, Ltd., Glasgow, £235 15s.; work at Belvidere Hospital, *A. & J. Faill, Ltd., Glasgow, £105 10s.

Herts.—Adaptation of buildings, Cattadells, Hemel Hempstead, for use as children's home, for C.C.: *W. Durant Wells.

¶London (Air Ministry).—Contracts placed to value of £500 or over for week ended April 12:—

Air filtration and ventilation work: Norris Warming Co., Ltd., London.

General maintenance work: Pearson & Fraser, Lerwick; E. Jones, Penmaenmawr; G. & J. P. Gregory, Caernarvon; and Parker & Calvert, Ltd., Heywood.

Structural steelwork: Tees-side Bridge & Engineering Works, Ltd., Middlesbrough; P. & W. MacLellan, Ltd., Glasgow; Cleveland Bridge & Engineering Co., Ltd., Darlington; Braithwaite & Co. (Engineers), Ltd., Newport; Motherwell Bridge & Engineering Co., Ltd., Motherwell; W. Bain & Co., Ltd., Coatbridge; Glasgow Steel Roofing and Engineering Co., Ltd., Glasgow; Redpath, Brown Engineering Co., Ltd., Glasgow; and Francis Morton & Co., Ltd., Liverpool.

Building work: Caston & Co., Ltd., London; and M. & F. O. Foster & Co., Ltd., Hitchin.

Contracts placed for April 19.—General maintenance work: Nathaniel Grieve, Edinburgh; H. C. Janes, Ltd., Luton; E. K. Yonell & Sons, Ltd., Coventry; E. Mortimer & Son, Bath; and C. Jenner & Son, Ltd., Folkestone.

¶London (War Dept.).—Contracts placed for week ended April 12:—

Lanarkshire — hutting (erection) — Wm. Dickson & Co., Ltd., 56, Mill Hill, Musselburgh, Midlothian.

Northumberland—miscellaneous work— A. Anderson (Conts.), Ltd., 1, Stanmore-rd., Heaton, Newcastle.

Northumberland and Durham—hutting (erection)—J. Roxby Surtees, Ltd., Benfieldside, Co. Durham.

Yorks—temporary camps—E. Hunter, Belle Vue Works, Beaconsfield-st., Scarborough.

Lancashire—hutting (erection)—R. Carlyle & Co., Ltd., Elsinore-rd., Old Trafford, Manchester, 16.

Lincolnshire—miscellaneous work—Bowmer & Kirkland, Ltd., Heage, nr. Belper, Derbyshire.

Shropshire—miscellaneous work—Pye Bros. (Hereford), Ltd., Putson-av., Hereford.

North of Thames area—miscellaneous works—Seymour Estates, Ltd., 349-351, Cann Hall-rd., Leytonstone, E.11.

South of Thames area—miscellaneous works—Old Forge Estates, Ltd., 2, Hadlow-chams., Hadlow-rd., Sidcup.

Berks — constructional work — Horsley Bridge & Thomas Piggott, Ltd., Tipton.

Surrey—miscellaneous works—E. & L. Berg, Ltd., Hinchley Wood, Esher.

Wilts—hutting (erection)—F. Rendell & Sons, 11-12, St. John-st., Devizes.

Sussex—miscellaneous work—Eldridge & Cuttenden, 39, King's-rd., St. Leonards-on-Sea; and W. Llewellyns & Son, Ltd., 3, Cornfield-ter., Eastbourne.

Devon—hutting (erection)—Hawkins Bros., Strouden-rd., Winton, Bournemouth.

Londonderry—hutting (erection) and miscellaneous work—Crawford & Eakin, 60, Foyle-st., Londonderry.

Co. Fermanagh—hutting (erection)—J. & R. W. Taggart, 22-30, Hopefield-av., Belfast.

Shrewsbury. — Brick building for use as community kitchen centre at St. Michael's-st., for T.C. A. W. Ward, Boro' Sur. : *G. Oakley, Meadow-pl., Shrewsbury.

Southport.—Two additional flats to existing block at 8, Park-rd., for T.C. : *T. Hampson.

Tendring.—External painting of 72 houses, for R.D.C. S. E. Carroll, Sur. : *Robinson & Co., Sidcup; *J. Bowyer, Weeley; *Lucas & Sons, Ramsey.

Uttoxeter. — Alterations to old brewery premises, for U.D.C. S. S. Proud, Sur. : *Ward & Godbehere, Ltd., Smithfield-rd., Uttoxeter, £787.

Wallsend.—Extensions to offices for North Eastern Marine Engineering Co., Ltd. L. J. Couves & Partners, architects, Westfield- av., Gosforth, Newcastle : *J. R. Rutherford & Sons, Minories Joinery Works, Jesmond, Newcastle.

Worcestershire. — Works, for C.C. : Improvement to heating system, Stoke Works council school, *E. Berryman, 4, Stourbridge-rd., Halesowen; reinstatement of floor of gymnasium at Bromsgrove County High school, *R. W. Brooke & Co., Ltd., 36, Dale-st., Liverpool; improvement to sanitary conveniences at Stoke Prior council school, *W. Weaver, Ltd., The Strand, Bromsgrove; painting male casual ward at a P.A.C. institution, *L. I. Evans, Worcester-st., Bromsgrove.

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IN PARLIAMENT

Rubble In Hyde Park.

Mr. Stokes asked the Parliamentary Secretary to the Ministry of Works and Buildings why rubble from damaged buildings was being dumped into Hyde Park, whilst at the same time rubble was being removed from the same dump for filling purposes.

Mr. Hicks said that the material being dumped in Hyde Park was hardcore collected from a number of scattered sites in the area. The hardcore was being used for building purposes, and the lorries taking the material away were delivering it to sites outside the London area. Facilities for rapid loading of vehicles at the dump had been provided, and this avoided the delays and difficulties which would arise if the lorries running to and from given centres were loaded at scattered points

Surface Shelters.

Mr. Stokes asked the Home Secretary whether he was aware that instructions had been given that surface shelters built with lime mortar might be deeply scraped and grouted with cement mortar, and whether experiments had proved this method to be satisfactory.

Miss Wilkinson said that the hon. Member had not quoted quite accurately the instructions to which he referred. This measure was not prescribed for general adoption, but was limited to cases where defects existed only to a mild degree. The object was to prevent the entry of water and frost into the joints of the brickwork, and the Home Office were satisfied that the treatment was effective for this purpose.

OFFICIAL NOTIFICATIONS

Distribution of Steel Supplies.

The following announcements are made by the Ministry of Supply :

The Iron and Steel Control's booklet " Distribution of Steel Supplies No. 3, Customers," directed that application for steel authorisations should be addressed to the Government Department under whose responsibility the steel was to be used. From now on applications from certain raw material industries will be dealt with by the appropriate controller.

In the case of iron, steel and ferro-alloys, application forms for authorisations of steel for : (1) the manufacture of new plant and machinery; (2) the maintenance and repair of existing plant, and (3) packages and containers to be used in processes of manufacture of iron and steel can be obtained from the Iron and Steel Control, Ashorne Hill, Leamington Spa. The processes referred to are :—

All processes involved in the production of ores, ferro-alloys, cinder and scale, and semi-finished iron and steel as enumerated in the First Schedule of the Control of Iron and Steel (No. 8) Order, 1940; tungsten ore, concentrates, residues tantalem ore; tantalem metal and tantalem compounds; titanium carbide; niobium (columbium); chrome ore; wolfram, including wolframite and scheelite; magnesite; and the collection and treatment of iron and steel scrap.

Applications for steel for building should also be referred to the Control in the first instance, although, except in cases of new building wholly or partly financed by the Ministry of Supply, authorisations will be issuable by the Ministry of Works and Buildings.

In the case of timber, application forms for authorisations of steel for (1) the manufacture of new plant and machinery; (2) the maintenance and repair of existing plant, and (3) packages and containers to be used in certain processes relating to timber production can be obtained from the Timber Control, Clifton Down Hotel, Bristol 8. The processes referred to are :—

The felling of trees; the extraction of felled timbers from the woods; the conversion of timbers from log to plank; the further conversion of the through and through plank to defined specifications; the cutting of imported timber to specifications; the transport and storage of timber; the manufacture of plywood and cutting of veneer.

An Engineering Directory.

The Bristol Engineering Manufacturers' Association, of 104, Filton-avenue, Bristol 7, have issued a new directory, entitled the " Bristol Engineering Directory and West of England Buyers' Guide," containing the names of the President and members of the Council, together with an alphabetical list of manufacturers and suppliers and other information.

A Retirement.

Mr. Charles Corben, managing director of Messrs. R. Corben and Son, Ltd., of Maidstone, Kent, has retired after nearly 50 years with the firm. In the company of Mr. J. C. Corben and Mr. W. T. Tidy, directors, 60 long-service employees of the firm met recently at supper to bid farewell to him, when a presentation was made on behalf of the employees.

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